Delineation of Potential Jurisdictional Wetlands
under
Section 404 of the Clean Water Act & California Coastal Act

Navarro River Redwoods State Park
Albion, Mendocino county
California

California State Parks, Mendocino District

APPENDICES

Report prepared by Bill Maslach, California State Parks.
Field delineations by Bill Maslach & Peter Warner, California State Parks.
Aerial photograph flown 11/2007.

1.0 Introduction

A wetland delineation study to describe the location and extent of waters, including wetlands, which may be considered jurisdictional by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act and the California Coastal Act, was conducted on and adjacent to the 12-acre Navarro-by-the-Sea Study Area within Navarro River Redwoods State Park in Mendocino County, California. Wetland vegetation, hydrology, and soils were examined to determine the presence of potential wetlands as defined by the Corps of Engineers and the California Coastal Act. Approximately 10 acres of Section 404 jurisdictional wetland and 11.6 acres of California Coastal Act wetland were documented in the study area.

The Clean Water Act gives the Corps jurisdiction over "Waters of the United States," which include, in part: lakes, rivers, streams (including intermittent streams) and wetlands. Under the Clean Water Act, the term "wetlands" means:

> *... those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.* (33 CFR § 328.3)

The Corps has published a wetland delineation manual including data sheets to use in the determination of the presence or absence of wetlands. These procedures and delineation results are presented in this report.

2.0 Methods

This delineation study has been conducted in accordance with the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual) (Environmental Laboratory 1987), incorporating data sheets from the Western Region Manual (USACE, 2007). This study evaluated the presence or absence of indicators of three wetlands parameters described in the Corps Manual. The three parameters used to determine the presence of wetlands are (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. According to the Corps Manual (1987):

> *"... [E]vidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland delineation."* (p. 12)

Prior to conducting field studies, available reference materials were reviewed, including the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the mouth of the Navarro River (FEMA, 1983), historical photographs, and the Mendocino County Soil Survey, Western Part (Natural Resource Conservation Service, 2001). The delineation was completed by Bill Maslach and Peter Warner on June 26, 2007 and by Bill Maslach on January 16 & 17, 2008 for the areas that had the potential to meet wetland definitions.

2.1 Vegetation

The indicator status assigned to a species designates the probability of that species occurring in a wetland. A species with an indicator of OBL, FACW, or FAC (excluding FAC-) is considered to be typically adapted for life in a wetland (hydrophytic vegetation). A species indicator of FAC-, FACU and NL determines an upland species. The wetland occurrence probability and abbreviations utilized in the lists are presented below.

INDICATOR STATUS	DESCRIPTION	OCCURRENCE IN WETLANDS
OBL	obligate wetland plants	>99%
FACW	facultative wetland plants	67-99%
FAC	facultative plants	34-66%
FACU	facultative upland plants	1-33%
UPL	obligate upland plants	<1%
NI	no indicator (insufficient information) for the region (rated neutral)	-
NL	not listed (rated upland)	-
plus sign (+)	frequency toward higher end of a category	-
minus sign (-)	frequency toward lower end of a category	-
asterisk (*)	indicates tentative assignment based on limited information	-

The dominant vegetation at each sample point was noted and evaluated for prevalence of hydrophytes. Indicator status follows Reed (1988).

2.2 Hydrology

Wetland hydrology is a term which encompasses hydrologic characteristics of areas that are periodically inundated or saturated within 12 inches of the surface at some time during the growing season. Recorded data can be used when available to determine wetland hydrology. Recorded data showing inundation or saturation within 12 inches of the surface for a minimum of five percent of the growing season (18 days coastal Mendocino County) is considered evidence of wetland hydrology.

When studies are conducted at a time of year when surface water, ground water, or saturated soils can not be observed, evidence of wetland hydrology is based on observation of the hydrologic indicators described in the 1987 *Corps Manual*. Evidence of wetland hydrology can include direct evidence (primary indicators), such as visible inundation or saturation, surface sediment deposits, and drift lines, or indirect indicators (secondary indicators), such as oxidized root channels and algal mats. If indirect or secondary indicators are used, at least two secondary indicators must be present to conclude that an area has wetland hydrology. The drainage in the study area was examined for these hydrologic indicators. The presence of any primary or secondary wetland hydrologic indicators was noted at each sample point.

2.3 Soils

The Natural Resource Conservation Service defines a hydric soil as:

> *"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part."*
>
> (Federal Register July 13, 1994, US Department of Agriculture, Natural Resource Conservation Service.)

Soils formed over long periods of time under wetland (anaerobic) conditions sometimes possess characteristics that indicate that they meet the definition of hydric soils.

At each sample point a soil pit was dug to a minimum of a 18-inch depth where possible. In each pit distinct soil layer depths were noted and their matrix and mottle colors (if present) were compared to the Munsell soil color chart (GretagMacbeth 2000) for color appearance (hue), intensity (value), and shade (chroma). Redoximorphic features and soil texture were noted.

3.0 Results

The results were taken from sample pits and recorded on data sheets (Appendix C). Locations of sample points are depicted on the delineation maps (Appendix A). General locations of most sample points are also depicted on a historic photograph of a portion of the study area (Appendix B).

The wetland hydrology, hydric soils, and hydrophytic vegetation indicators used to make wetland determinations are summarized below. Potential jurisdictional areas described below are shown on the delineation map (Appendix B). Development within all areas of the flood plain as mapped on the FEMA flood map may be under the jurisdiction of those agencies regulating wetlands. The mapped wetlands in the study area more or less correspond to the FEMA flood map. However, there is one small mapped unit that did not meet wetland criteria that is within the flood plain.

Culverts that occur in the red alder vegetation plots may be considered "other waters" of the US and may be under jurisdiction of the US Army Corps of Engineers. Because these vegetation communities are mapped as red alder, they are considered Environmentally Sensitive Habitat Areas (ESHA's) under the Mendocino County Local Coastal Plan.

PLOT	PLANT COMMUNITY	SOIL	HYDROLOGY	VEGETATION	CA COASTAL ACT	US CLEAN WATER ACT	ACRES
1	Marshy Grassland	Yes	Yes	Yes	Yes	Yes	0.23
2	Arroyo Willow Thicket	Yes	Yes	Yes	Yes	Yes	2.93
3	Non-Native Grassland / Shrubs	No	No	No	No	No[1]	0.27
4	Marshy Disturbed Land	Yes	Yes	Yes	Yes	Yes[1]	0.10
5	Red Alder	No	No	Yes	Yes	No	1.39
6	English Ivy / Blackberry	Yes	Yes	No	Yes	No	0.06
7	Coyote Brush Coastal Scrub	No	No	No	No	No	10.53
8	Coastal Beach	Yes	Yes	No	Yes	Yes[2]	3.79
9	Arroyo Willow Thicket	No	No	Yes	Yes	No	0.29
10	Bullrush / Cattail Wetland	Yes	Yes	Yes	Yes	Yes	2.88
11	Ornamental Landscaping / Eucalyptus	No	No	No	No	No	2.14

[1] Although no wetland parameters occur on this mapped unit, the unit falls within the FEMA mapped floodplain.
[2] Wetland vegetation was not present, but the USACE will assume jurisdiction over a coastal beach.

4.0 References

Environmental Laboratory. 1987. "Corps of Engineer Wetlands Delineation Manual," Technical Report Y-87-1, US Army Engineer Waterway Experiment Station, Vicksburg, Miss.

Federal Register February 24, 1995. US Department of Agriculture, Natural Resource Conservation Service.

Federal Register July 13, 1994. US Department of Agriculture, Natural Resource Conservation Service

GretagMacbeth. 2000. Munsell Soil Color Charts. New Windsor, New York.

Natural Resource Conservation Service. 2001. Mendocino County Soil Survey, Western Part.

Reed, Jr., Porter B. 1988. National List of Plant Species That Occur in Wetlands: National Summary. U.S. Fish & Wildlife Service. Biological Report 88 (24). 244 pp.

Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the mouth of the Navarro River (FEMA, 1983). Panel 750 of 110. Accessed online at

Natural Resources Conservation Service. August 11, 2005. National Hydric Soils List by State, California Portion of the National Hydric Soil List. http://soils.usda.gov/use/hydric/lists/state.html

U.S. Army Corps of Engineers (USACE). 2007. Draft Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region. U.S. Army Engineer Research and. Development Center. Vicksburg, MS 39180-6199.

Appendix A. Wetland Delineation Maps

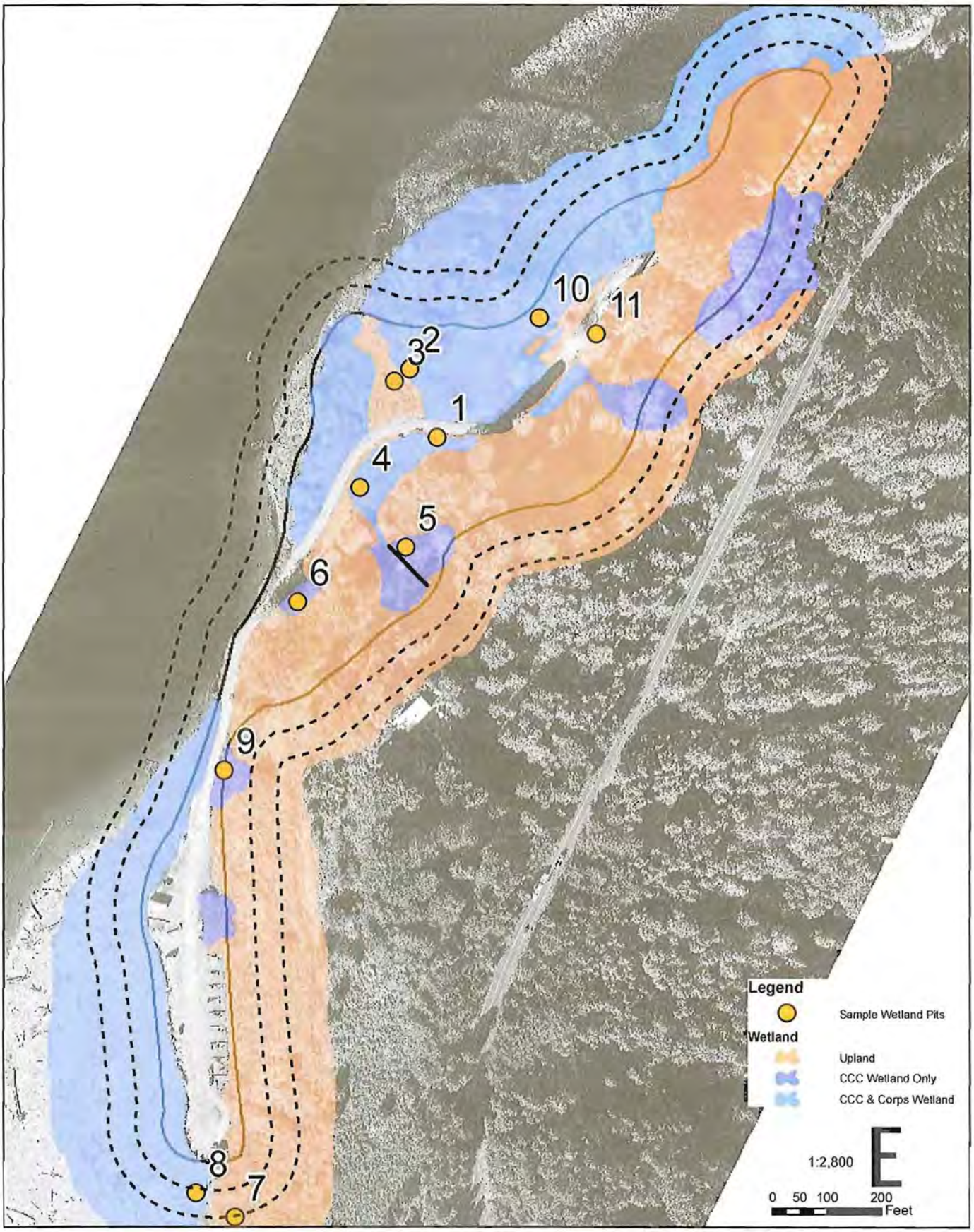

Figure A1. Navarro-by-the-Sea Wetland Delineation Map - Navarro River Redwoods State Park. Upland areas, California Coastal Act (CCC) wetlands, and both CCC wetlands and the US Army Corps of Engineers (Corps) wetlands are shown based on wetland parameters (soil, vegetation, & hydrology) from sample pit locations.

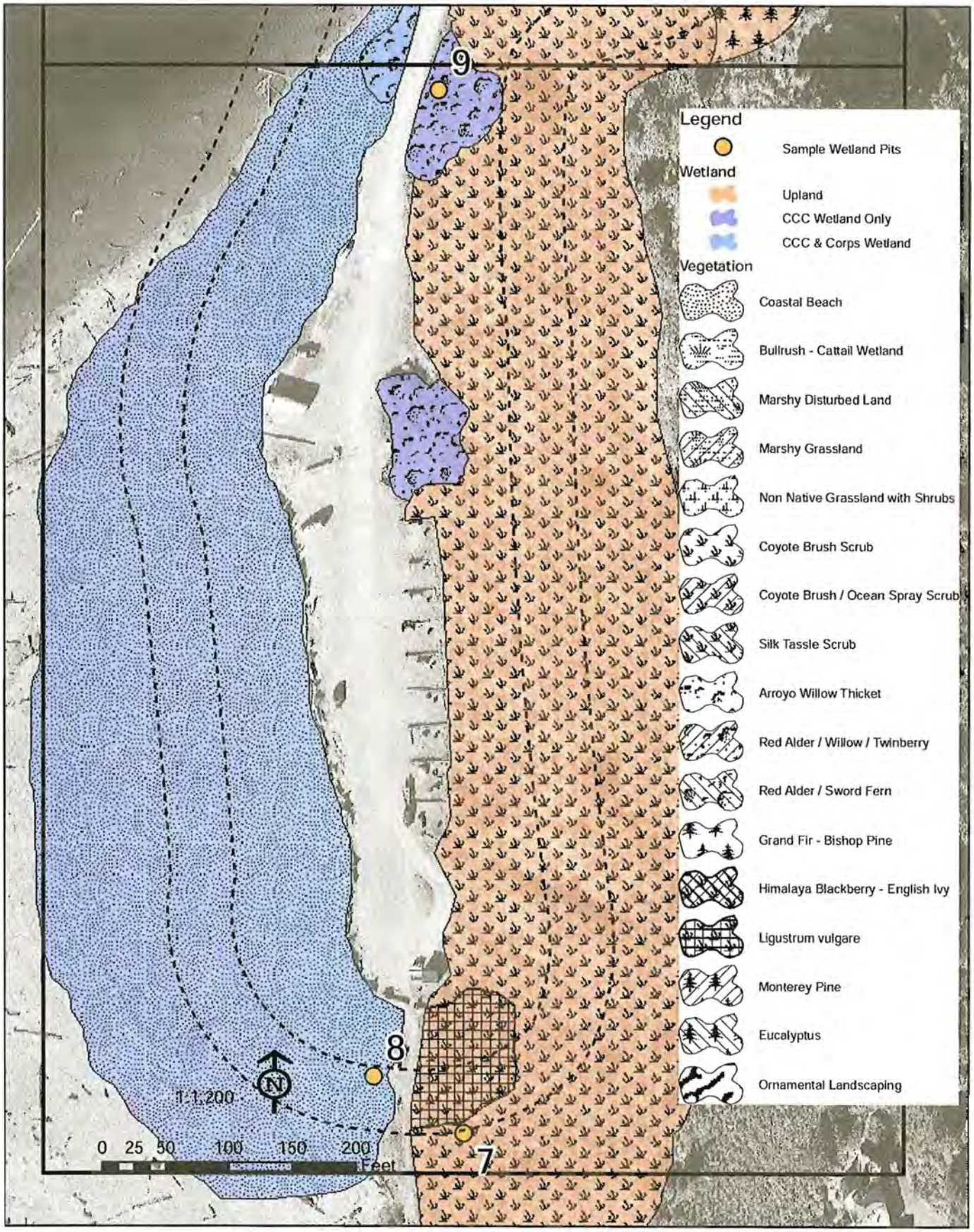

Figure A2 Navarro-by-the-Sea Wetland Delineation Map - Navarro River Redwoods State Park - Sheet 01. Upland areas, California Coastal Act (CCC) wetlands, and both CCC wetlands and the US Army Corps of Engineers (Corps) wetlands are shown based on wetland parameters (soil, vegetation, & hydrology). The sample pits may represent several vegetation classes delineated on the map.

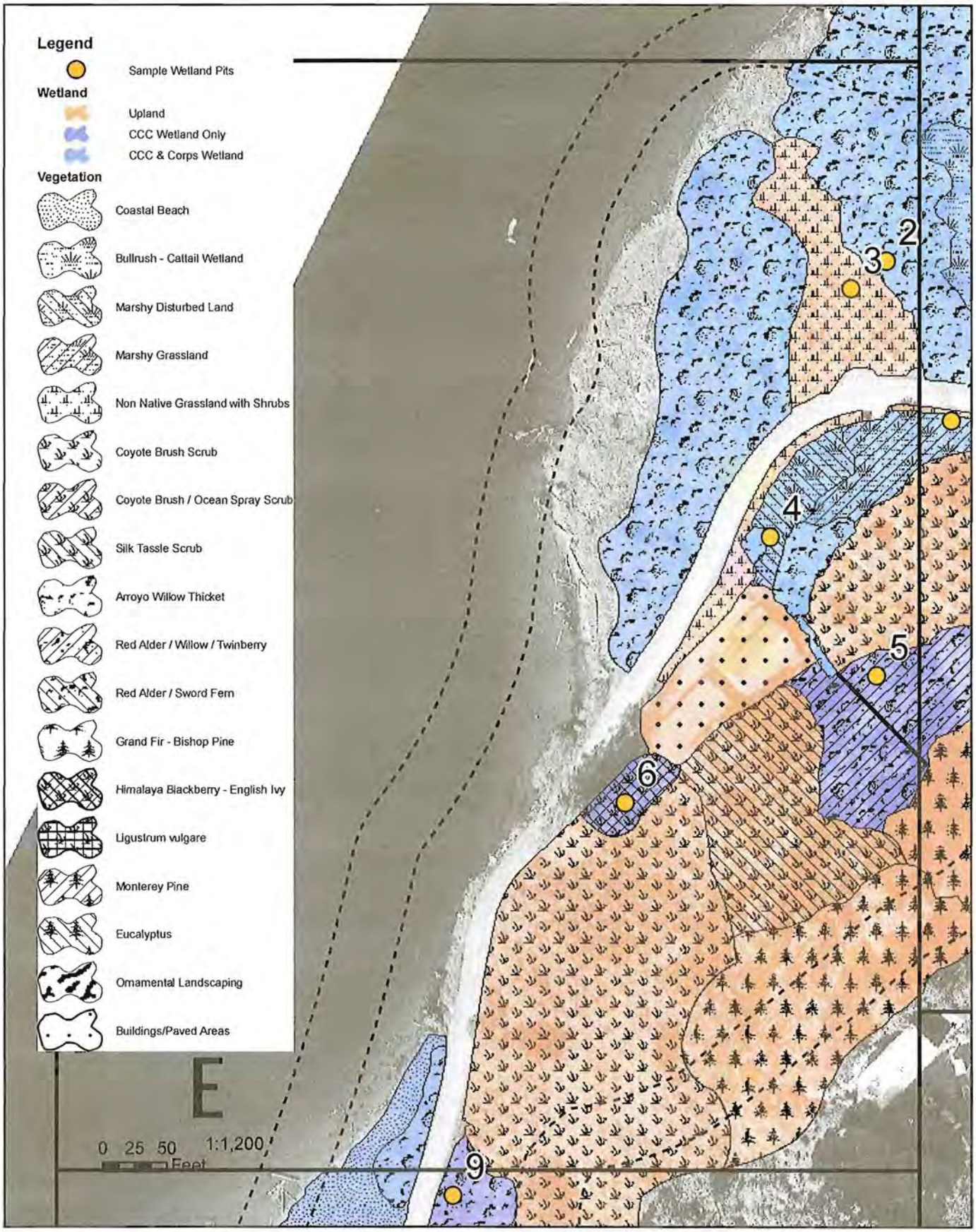

Figure A3. Navarro-by-the-Sea Wetland Delineation Map - Navarro River Redwoods State Park - Sheet 02. Upland areas, California Coastal Act (CCC) wetlands, and both CCC wetlands and the US Army Corps of Engineers (Corps) wetlands are shown based on wetland parameters (soil, vegetation, & hydrology). The sample pits may represent several vegetation classes delineated on the map.

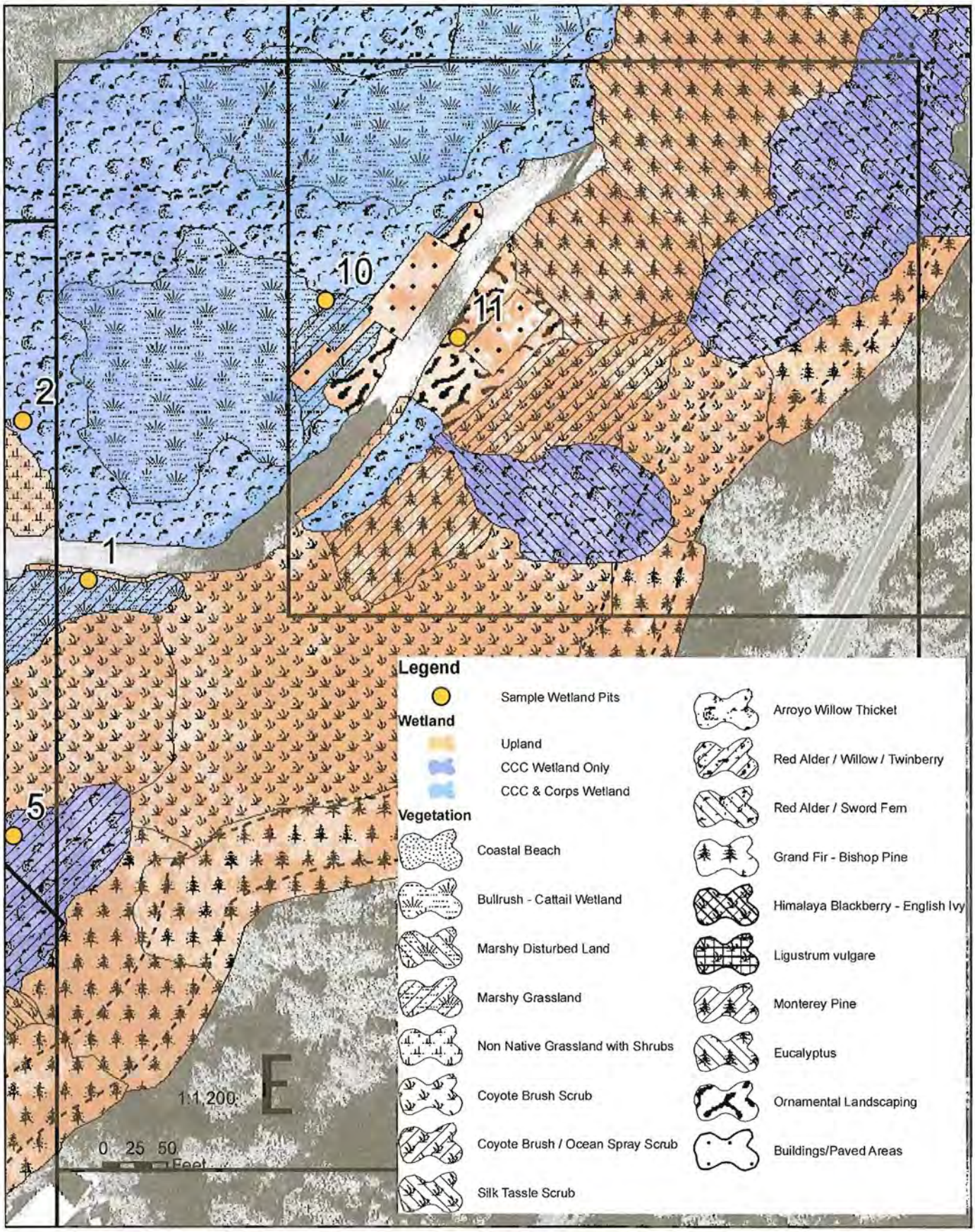

Figure A4. Navarro-by-the-Sea Wetland Delineation Map - Navarro River Redwoods State Park - Sheet 03. Upland areas, California Coastal Act (CCC) wetlands, and both CCC wetlands and the US Army Corps of Engineers (Corps) wetlands are shown based on wetland parameters (soil, vegetation, & hydrology). The sample pits may represent several vegetation classes delineated on the map.

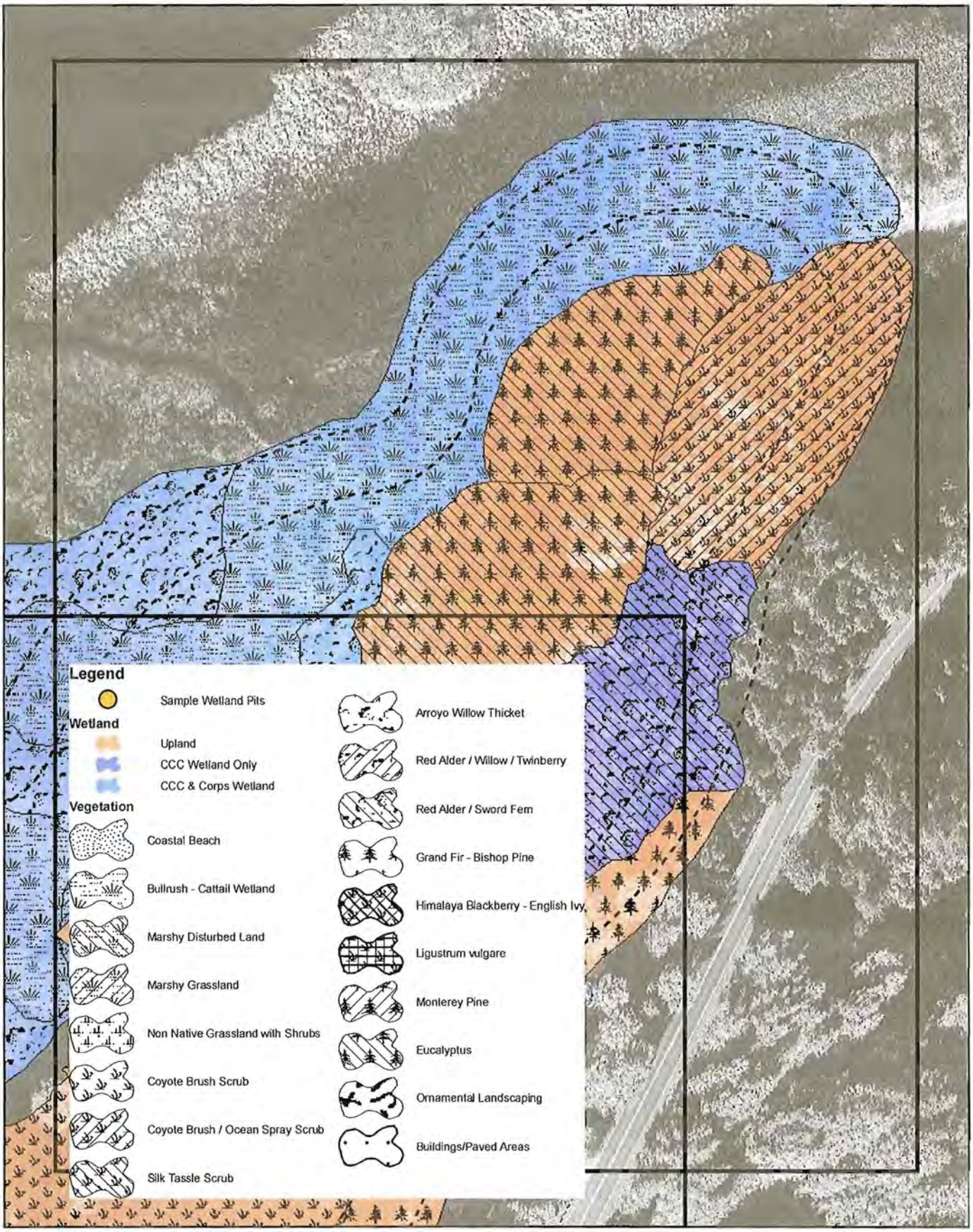

Figure A5. Navarro-by-the-Sea Wetland Delineation Map - Navarro River Redwoods State Park - Sheet 04. Upland areas, California Coastal Act (CCC) wetlands, and both CCC wetlands and the US Army Corps of Engineers (Corps) wetlands are shown based on wetland parameters (soil, vegetation, & hydrology). The sample pits may represent several vegetation classes delineated on the map.

Appendix B. Historic Photographs with Selected Wetland Sample Pit Locations

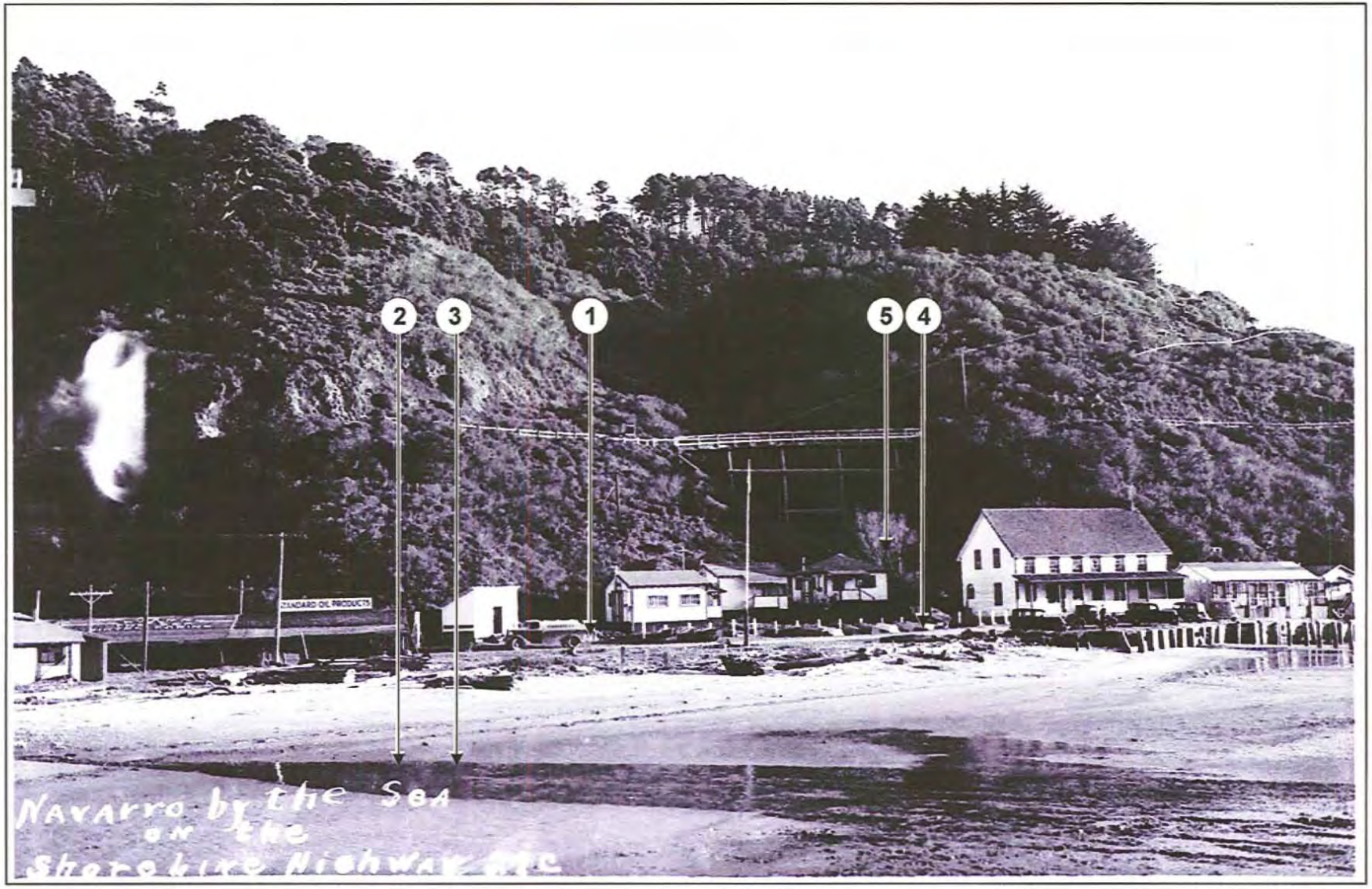

Figure B1. Navarro Inn Historic Photograph with Wetland Sample Pits. Approximate sample pit locations are shown on the photograph and correspond to the sample pit numbers on the data sheets.

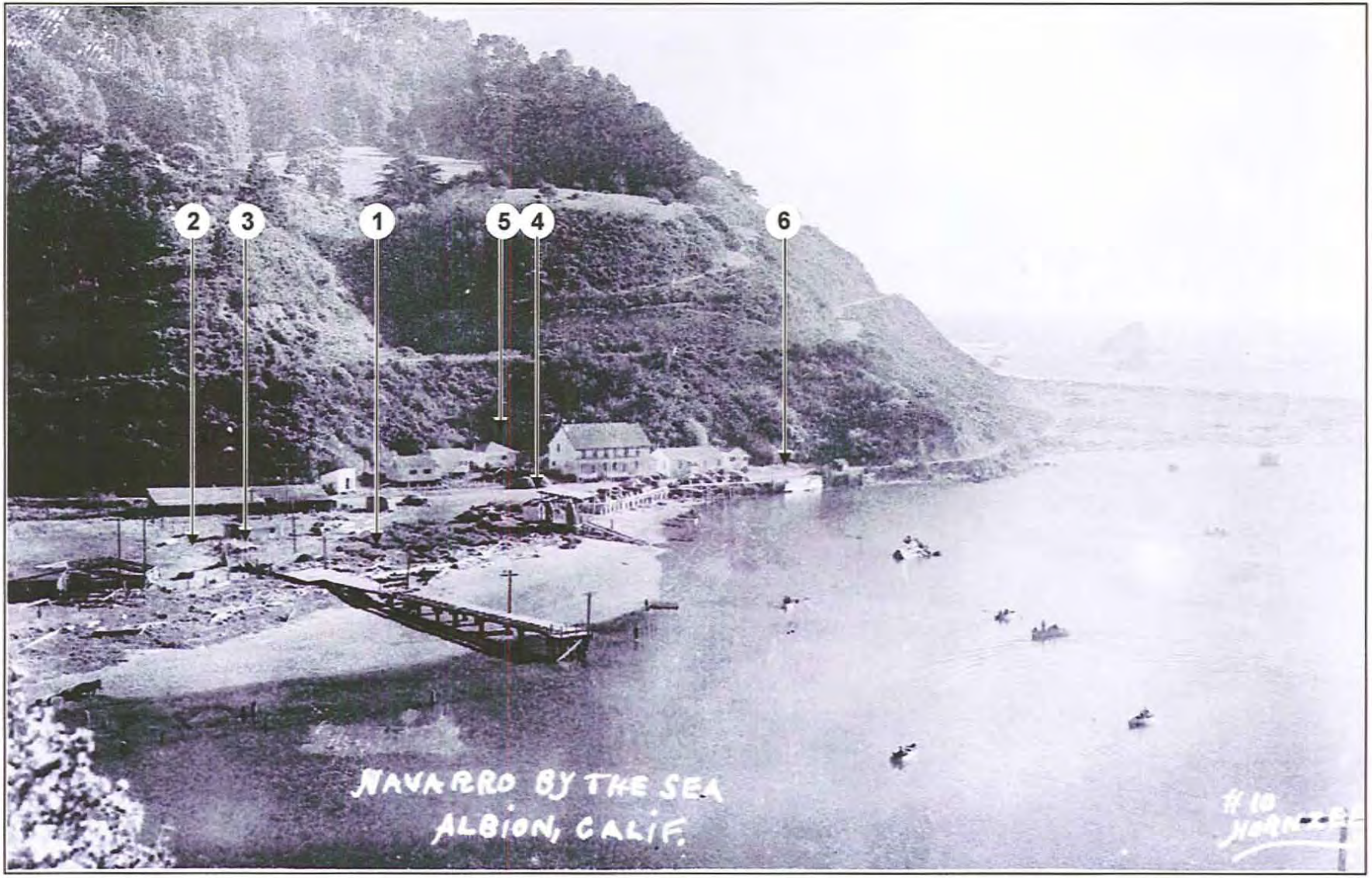

Figure B2. Navarro Inn Historic Photograph with Wetland Sample Pits. Approximate sample pit locations are shown on the photograph and correspond to the sample pit numbers on the data sheets.

Appendix C. Photographs of Selected Wetland Sample Pits

Figure C1. General Area of Sample Pit #6. Typical vegetation is shown in the photograph. See corresponding datasheet. White circle with "X" indicates general area of sample pit.

Figure C2. General Area of Sample Pit #7. Typical vegetation is shown in the photograph. See corresponding datasheet. White circle with "X" indicates general area of sample pit.

Figure C3. General Area of Sample Pit #8. Typical vegetation is shown in the photograph. See corresponding datasheet. White circle with "X" indicates general area of sample pit.

Figure C4. General Area of Sample Pit #9. Typical vegetation is shown in the photograph. See corresponding datasheet. White circle with "X" indicates general area of sample pit.

Appendix D. Study Area Photograph

Figure D1. General Area of Study Area. Photograph taken from Highway 1 looking south at the Study Area.

Appendix E. Wetland Data Sheets

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 06/26/2007

Applicant/Owner: California State Parks State: CA Sampling Point: 1

Investigator(s): Bill Maslach Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): flat above estuary Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Lat: 123 45' 24.1" Long: 39 11' 39.8" Datum:

Soil Map Unit Name: Tropaquepts, 0 to 15% slope (a hydric soil) NWI classification: Palustrine Scrub/Emergent

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:
Soil has accumulated in many low depressions and most of the mapped unit is at least somewhat inundated during the wet season. Desiccated algal crusts are visible during the dry season. The adjacent paved entrance road prism acts as a levee for the small watercourse flowing off the slope behind the inn, causing increased soil saturation throughout the mapped unit. The natural course of the stream was not determined.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasiolepis*	10	Yes	FACW
2.			
3.			
4.			
Total Cover:	10		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. *Holcus lanauts*	50	Yes	FAC
2. *Juncus effusus*	15	Yes	OBL
3. *Alopecurus aequalis*	10	No	OBL
4.			
5.			
6.			
7.			
8.			
Total Cover:	75		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☐

Remarks:
Increased hydrophytic vegetation at sample site on south side of the road due to impounded water behind road berm. However, without the road berm, the soil may be as saturated as it is now due to the potential for water to move uninterrupted.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 -15	10 YR 2/2						silty clay	few 5" rocks of road base origin

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ✓ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ___

Remarks:

Soil (Tropoquepts, 0-5% slope) is listed on the National List of Hydric Soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No ___ Depth (inches): 15

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 10

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Pit dug to 18". Drift deposits of large woody debris in mapped unit from historic (perhaps > 10 yrs) flood event.

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 06/26/2007

Applicant/Owner: California State Parks State: CA Sampling Point: 2

Investigator(s): Bill Maslach, Peter Warner Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): Tidal marsh Local relief (concave, convex, none): slightly concave Slope (%): 0

Subregion (LRR): Lat: 123 45' 24.8" Long: 39 11' 40.9" Datum:

Soil Map Unit Name: Tropaquepts, 0 to 15% slope (a hydric soil) NWI classification: Palustrine Shrub - willow

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☑ No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑ No ☐	
Wetland Hydrology Present?	Yes ☑ No ☐	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasiolepis*	30	Yes	FACW
2. *Salix lucida*	20	Yes	NI
3.		No	NL
4.		No	NL
Total Cover:	50		
Sapling/Shrub Stratum			
1.		No	NL
2.		No	NL
3.		No	NL
4.		No	NL
5.		No	NL
Total Cover:	0		
Herb Stratum			
1. *Potentilla anserina*	40	Yes	OBL
2. *Oenanthe sarmentosa*	15	Yes	OBL
3. *Juncus effusus*	10	No	OBL
4. *Rubus ursinus*	10	No	FACW
5. *Holcus lanauts*	5	No	FAC
6. *Equisetum telmateia*	4	No	OBL
7.		No	NL
8.		No	NL
Total Cover:	84		
Woody Vine Stratum			
1.		No	NL
2.		No	NL
Total Cover:	0		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☐

Remarks:
Willow thicket with areas of standing water.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 -15	10 YR 2/2						silty clay	muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ✓ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ___

Remarks:

Soil (Tropoquepts, 0-5% slope) is listed on the National List of Hydric Soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ✓ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 2

Water Table Present? Yes ✓ No ___ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Pit dug to 18". Areas of standing water in saturated soil.

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 06/26/2007

Applicant/Owner: California State Parks State: CA Sampling Point: 3

Investigator(s): Bill Maslach, Peter Warner Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): Tidal flat Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR): Lat: 123 45' 25.1" Long: 39 11' 40.7" Datum:

Soil Map Unit Name: Tropaquepts, 0 to 15% slope (a hydric soil) NWI classification: Palustrine Scrub-Shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:
Grassy opening in tidal-edge willow thicket. Appears that this clearing may have been an old road to the water.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.		No	NI
2.		No	NL
3.		No	NL
4.		No	NL
Total Cover:	0		
Sapling/Shrub Stratum			
1.		No	NL
2.		No	NL
3.		No	NL
4.		No	NL
5.		No	NL
Total Cover:	0		
Herb Stratum			
1. *Vulpia myuros*	40	Yes	FACU
2. *Linum bienne*	30	Yes	NL
3. *Plantago lanceolata*	7	No	FAC-
4. *Rumex salicifolia*	5	No	OBL
5. *Aira caryophylla*	3	No	NL
6. *Briza maxima*	5	No	NL
7.		No	NL
8.		No	NL
Total Cover:	90		
Woody Vine Stratum			
1.		No	NL
2.		No	NL
Total Cover:	0		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

☑ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Wetland Non-Vascular Plants[1]

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☐

Remarks:
Open area mostly of annual grasses.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10 YR 3/4						sandy silt	sml. & med. river pebbles & rocks
6 - 20	10 Y/R 3/4						silty sand	many fine pebbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ___

Remarks:

Soil (Tropoquepts, 0-5% slope) is listed on the National List of Hydric Soils.
This site is in an upland area between two wetlands, possibly connecting the inn parking lot to an old boat launch or ramp. This area may have been filled with mostly native soil, but there are some angular small rocks < 2" indicating road base material may have been introduced.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ___ No ☑ Depth (inches): _____

Water Table Present? Yes ___ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ___ No ☑

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

Remarks:

Pit dug to 18".

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 06/26/2007

Applicant/Owner: California State Parks State: CA Sampling Point: 4

Investigator(s): Bill Maslach Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): flat above estuary Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Lat: 123 45' 25.9" Long: 39 11' 38.6" Datum:

Soil Map Unit Name: Tropaquepts, 0 to 15% slope (a hydric soil) NWI classification: Palustrine Scrub/Emergent

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☑

Are Vegetation Yes, Soil Yes, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:
Much of this mapped unit, which is similar to Pit #1, has portions of an old paved road visible in an historic photograph.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasiolepis*	5	Yes	FACW
2.			
3.			
4.			
Total Cover:	5		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. *Hordeum marinum*	20	Yes	FAC+
2. *Melilotus indicus*	10	Yes	NL
3. *Briza maxima*	10	Yes	NI
4. *Holcus lanatus*	10	No	FACW
5. *Leontodon nudicaulis*	8	No	NL
6. *Lolium multiflorum*	5	No	FAC
7. *Parentucellia viscosa*	5	No	FAC
8.			
Total Cover:	68		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☑

Remarks:
The vegetation in this unit is likely not hydrophytic due to the impermeable asphalt layer from the old road. Adjacent vegetation clearly indicates hydrophytic vegetation.

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 -10	10 YR 3/4						silty clay	with rocks of road base origin

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ☑

Remarks:

Soil (Tropoquepts, 0-5% slope) is listed on the National List of Hydric Soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☑ Algal Mat or Crust (B4)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ___ No ☑ Depth (inches): _____

Water Table Present? Yes ___ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ☑ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
See historic photo in report.

Remarks:

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 06/26/2007

Applicant/Owner: California State Parks State: CA Sampling Point: 5

Investigator(s): Bill Maslach, Peter Warner Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): hill slope above tidal flat Local relief (concave, convex, none): concave Slope (%): 60

Subregion (LRR): Lat: 123 45' 24.9" Long: 39 11' 37.8" Datum:

Soil Map Unit Name: Dystropepts, 30 to 75% slope (not a hydric soil) NWI classification: Upland Scrub-Shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☑

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:
Vegetated swale. Comparison of historic photographs indicate that the natural topography has been modified through the placement of fill material in the drainage. The watercourse has been placed into a corrugated metal pipe culvert approximately 24" in diameter.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix lasiolepis*	30	Yes	FACW
2. *Alnus rubra*	20	Yes	FACW
3.			
4.			
Total Cover:	50		
Sapling/Shrub Stratum			
1. *Ribes sanguineum*	10	Yes	NL
2. *Sambucus racemosa*	10	Yes	FACU
3.			
4.			
5.			
Total Cover:	20		
Herb Stratum			
1. *Polystichum munitum*	20	Yes	FACU
2. *Equisetum telmateia*	20	Yes	OBL
3. *Rubus ursinus*	10	Yes	FAC+
4. *Calystegia purpurata ssp. purpurata*	10	No	NL
5. *Stachys ajugoides*	8	No	OBL
6. *Heraculum lanatum*	8	No	FACU
7. *Marah oreganus*	5	No	NL
8.			
Total Cover:	81		
Woody Vine Stratum			
1. *Lonicera hispidula*	5	Yes	NL
2. *Lonnicera involucrata*	5	Yes	FAC
Total Cover:	10		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 55% (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 =
UPL species	x 5 =
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ✓ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Wetland Non-Vascular Plants[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☐

Remarks:
Concave swale with fill material. Small creek has been placed into a corrugated metal pipe culvert.

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10 YR 3/4						clay loam	sml. unconsol. pebbles & Frcsn rocks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ___

Remarks:

Soil (Dystropepts, 30-75% slope) is not a hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ___ No ☑ Depth (inches): _____

Water Table Present? Yes ___ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ___ No ☑

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

Remarks:

Pit dug to 20".

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 01/16/2008

Applicant/Owner: California State Parks State: CA Sampling Point: 6

Investigator(s): Bill Maslach Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): tidal flat Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Lat: 123 45' 27.4" Long: 39 11' 36.8" Datum:

Soil Map Unit Name: Tropaquepts, 0 to 15% slope & Coastal Beaches (both hydric soils) NWI classification: Upland Scrub-Shrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. *Hedera helix*	90	Yes	NL
2. *Rubus discolor*	50	Yes	FACW
3. *Baccharis pilularis*	10	No	NL
4.			
5.			
6.			
7.			
8.			
Total Cover:	150		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☐

Remarks:

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 3/2						organic	organic layer
2 - 7	7.5YR 3/3						silty clay	4-" angular rocks
7 - 8	7.5YR 3/3						pebble	layer of 1-" pebbles
8 - 19	7.5YR 3/3		10YR 5/6	15	RM	M	silty clay	few yellow mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ___

Remarks:

Soil (Tropoquepts, 0-5% slope and Coastal Beaches) is listed on the National List of Hydric Soils. Before construction of Navarro Inn and roads, this area likely sloped down to the river and probably flooded more frequently.
The presence of reduced matrix deeper in pit is suggestive of the Soil Map Unit Names, which are listed as hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Pit dug to 20". Seasonal flooding is evident by the presence of several sizes of woody debris.

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 01/16/2008

Applicant/Owner: California State Parks State: CA Sampling Point: 7

Investigator(s): Bill Masiach Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): +- concave Slope (%): 60

Subregion (LRR): Lat: 123 45' 28.7" Long: 39 11' 25.7" Datum:

Soil Map Unit Name: Dystropepts, 30 to 75% slope (not a hydric soil) NWI classification: Upland Scrub

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:
This is a broadly mapped unit consisting mostly of soils of Franciscan deposit, steep slopes, and a vegetation cover of scrub (Baccharis pilularis) and isolated trees and stands of trees (Abies grandis & Pinus muricata), occasionally at the edge of the forest.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1. *Baccharis pilularis*	30	Yes	NI
2.			
3.			
4.			
5.			
Total Cover:	30		
Herb Stratum			
1. *Agrostis hallii*	20	Yes	NL
2. *Artemesia douglasiana*	15	Yes	FAC+
3. *Toxicodendron diversilobum*	15	Yes	NI
4. *Claytonia perfoliata*	10	No	FACU
5. *Dryopteris arguta*	10	No	NI
6. *Rubus ursinus*	8	No	FAC+
7.			
8.			
Total Cover:	78		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☑

Remarks:
Although this sample site had Dryopteris arguta (NI), much of the mapped unit had Polystichum munitum (FACU), which shares the same wetland indicator status.

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 21	10YR 3/3						loamy clay	many 3+" angular rocks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ☑

Remarks:

Dystropepts, 30 to 75% slope (not a hydric soil)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ___ No ☑ Depth (inches): _____

Water Table Present? Yes ___ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ___ No ☑

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

Remarks:

Upland.

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 01/16/2008

Applicant/Owner: California State Parks State: CA Sampling Point: 8

Investigator(s): Bill Maslach Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): beach & estuarine shoreline Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Lat: 123 45' 29.6" Long: 39 11' 26.1" Datum:

Soil Map Unit Name: Coastal Beaches (a hydric soil) NWI classification: Marine/Est. Uncnsol Shore

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☑

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:
Although the vegetation criterion is not met, the area is within Corps jurisdiction.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. *Plantago lanceolata*	2	Yes	FAC-
2. *Camissonia cheiranthifolia*	1	Yes	NI
3. *Leontodon nudicaulis*	1	Yes	NL
4.			
5.			
6.			
7.			
8.			
Total Cover:	4		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☑

Remarks:
Vegetation is very sparse on the coastal beach and estuarine shoreline.

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
24"	10YR 6/4						sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☐

Remarks:

Soil (Coastal Beaches) is listed on the National List of Hydric Soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____

Water Table Present? Yes ☐ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ☑ No ☐

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

Remarks:

Pit in area above high tide, but mapped unit represents all coastal beaches and estuarine shorelines.

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 01/16/2008

Applicant/Owner: California State Parks State: CA Sampling Point: 9

Investigator(s): Bill Maslach Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): flat above estuary Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Lat: 123 45' 29.0" Long: 39 11' 33.6" Datum:

Soil Map Unit Name: Dystropepts, 30 to 75% slope (not a hydric soil) NWI classification: Estuarine Scrub/Emergent

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1. *Salix lasiolepis*	80	Yes	FACW
2. *Vinca major*	15	No	NI
3. *Baccharis pilularis*	10	No	NI
4. *Rubus ursinus*	5	No	FAC+
5.			
Total Cover:	110		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	0		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks:
Willow stands at the toe of the slope above the beaches.

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 1	10YR 2/2						organic	organic duff horizon
1 - 19	10YR 3/2						loamy clay	6+" angular rocks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☑

Remarks:

The pit occurs at the base of the hill, where the soil is not listed as a hydric soil, the road separates it's connection with the willow stands on the shore and beach where the soil is mapped as Coastal Beaches and is listed on the National List of Hydric Soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): 19

Water Table Present? Yes ☐ No ☑ Depth (inches): 19

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches): 19

Wetland Hydrology Present? Yes ☐ No ☑

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

Remarks:

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 01/16/2008

Applicant/Owner: California State Parks State: CA Sampling Point: 10

Investigator(s): Bill Maslach Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): freshwater estuary Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Lat: 123 45' 21.8" Long: 39 11' 41.9" Datum:

Soil Map Unit Name: Tropaquepts, 0 to 15% slope (a hydric soil) NWI classification: Estuarine Scrub/Emergent

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☑	No ☐	**Is the Sampled Area within a Wetland?** Yes ☑ No ☐
Hydric Soil Present?	Yes ☑	No ☐	
Wetland Hydrology Present?	Yes ☑	No ☐	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1. *Typha latifolia*	30	Yes	OBL
2. *Scirpus microcarpus*	40	Yes	OBL
3.			
4.			
5.			
Total Cover:	70		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	0		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks:

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 19	10YR 2/2						silty muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ✓ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ✓ Sediment Deposits (B2)
- ✓ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): 1

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): 1

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

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

Project/Site: Navarro Inn City/County: Albion / Mendocino Sampling Date: 01/16/2008

Applicant/Owner: California State Parks State: CA Sampling Point: 11

Investigator(s): Bill Maslach Section, Township, Range: Sec. 04; T 15N; R 17 W

Landform (hillslope, terrace, etc.): freshwater estuary Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): Lat: 123 45' 20.5" Long: 39 11' 41.7" Datum:

Soil Map Unit Name: Tropaquepts, 0 to 15% slope (a hydric soil) NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)

Are Vegetation No, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☑ No ☐

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soil Present?	Yes ☐	No ☑	
Wetland Hydrology Present?	Yes ☐	No ☑	

Remarks:
Soil along road has greater affinity to adjacent soil type, Dystropepts, than mapped Tropaquets. This is likely due to grading related to road and residence site preparation, and the sample pit being taken near the border of two soil types, which often intergrade and fluctuate at mapped borders.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Plantanus sp.*	20	Yes	NL
2.			
3.			
4.			
Total Cover:	20		
Sapling/Shrub Stratum			
1. *Anthoxanthum odoratum*	20	Yes	FACU
2. *Holcus lanatus*	20	Yes	FAC
3. *Hypochaeris radicata*	10	Yes	NI
4.			
5.			
Total Cover:	50		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	0		
Woody Vine Stratum			
1.			
2.			
Total Cover:	0		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☐ No ☑

Remarks:
Adjacent stands of eucalyptus were included in this mapping unit.

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 19	10YR 3/4						loamy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ☑

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9) **(except NW coast)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(NW coast)**
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Frost-Heave Hummocks (D4)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**

Field Observations:

Surface Water Present? Yes ___ No ☑ Depth (inches): _____

Water Table Present? Yes ___ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ___ No ☑

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

Remarks: