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environmental and natural resources law and strategy

March 21, 2007

Kevin R. Hamblin
Community Development Director
City of Eureka
531 K Street
Eureka, CA 95501-1146

Re: Marina Center Project – Information for EIR Process

Dear Mr. Hamblin:

I understand that the City is working on a Draft Environmental Impact Report for the proposed Marina Center project. Enclosed for your use in the DEIR analysis is a report regarding the occurrence of wetlands on the project site.

I believe I am on the City's mailing list regarding this project, but if you could check your records to confirm that I would greatly appreciate it.

Very truly yours,

David E. Moser

Enclosure

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DEPARTMENT OF
COMMUNITY DEVELOPMENT



ZENTNER



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**BALLOON TRACT
COASTAL ZONE WETLAND
DELINEATION
COASTAL COMMISSION
METHODOLOGY**

**Project No.:
874 PIE**

Zentner and Zentner

Oakland

Issued:
March 2007

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DEPARTMENT OF
COMMUNITY DEVELOPMENT

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Project Name:

Balloon Tract

Delineation By:

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I. INTRODUCTION

A. Purpose

This report presents a delineation of wetlands as defined under the California Coastal Act and Coastal Commission regulations for the Balloon Tract site in the northwest edge of the City of Eureka (hereafter referred to as the "site").

B. Location

The site (*Figure 1*) is located on the northwestern edge of the City of Eureka, just inland (within 250 feet) of Humboldt Bay in Humboldt County. The site can be found on the Eureka USGS 7.5 minute quadrangle map, on the east edge of section 21 and the west edge of section 22 in Township 5N, Range 1W (Humboldt Meridian).

The roughly triangular site is bounded on the northwest by Waterfront Drive, the eastern boundary coincides with existing commercial development alongside Broadway Street, while the southern boundary coincides with existing commercial development alongside Washington Street. The site once hosted a rail-yard and associated industrial facilities but is now vacant with some abandoned rails, rail cars and limited ruins. The adjacent industrial areas and a large on-site wetland discharge to a drainage channel through the west end of the site, which then empties into a small boat harbor across Waterfront Drive from the site.

C. Site Description

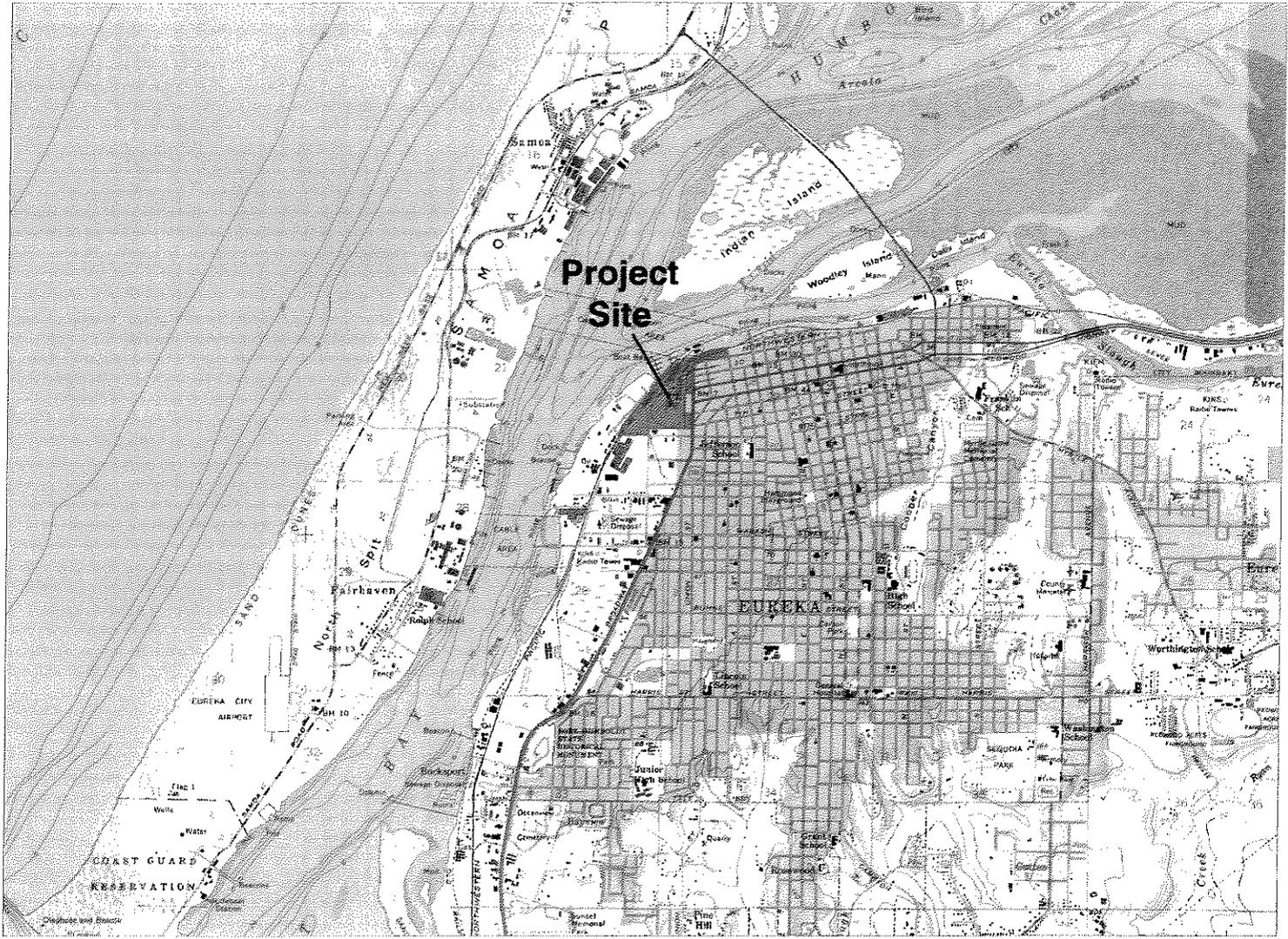
The site covers approximately 38 acres at the northwest edge of Eureka. The site is nearly level, with no prominent landmarks. Industrial facilities and vacant industrial lands run around the west, south and east edges of the site along with adjacent roads (Waterfront Drive on the north and northwest, Broadway Street on the east, and Washington Street on the south). Harbor and related facilities are located just north and northwest the site, across Waterfront Drive, on the edge of Humboldt Bay. Downtown Eureka is located just a few blocks east of the site.

1. Topography

The site is a plain of fill that dips a bit lower on the south, all within a few feet of high tide levels. There are several drainage ditches that cut one to several feet into the plain plus scattered low mounds of soil and debris that rise a few feet above the plain. Flapgates on the primary drainage ditch under Waterfront Drive, along the northwest side of the site, exclude tides from the site.

2. General soil types

The site was not included in the local soil survey (McLaughlin and Harridine 1965), but comparable areas to the east and to the south were identified as "Urban-Industrial", and like this



Project Name: Balloon Tract
 Project Number: 874 PIE
 Source: USGS 7.5 min
 Quads: Eureka, Fields Landing, CA
 Date: 6/15/06
 C:/874pie/fig1/location.dwg

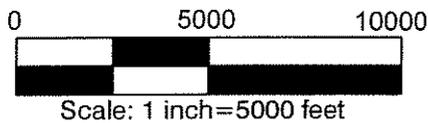


FIGURE 1
 Location Map
 Eureka, CA

	95 Linden Street, Suite 6 Oakland California 94607 510.622.8110

site, have highly variable fill materials (including sand, loam, clay, gravel, and concrete rubble) on top of former tidal marsh. These areas were given no further attention in the soil survey, as they have little or no agricultural potential.

3. Historic and current uses of property

The site was once tidal marsh. In the late 1800s, the tidal marsh was filled and railroad maintenance buildings and train tracks were built for the Union Pacific Railroad. The site became a switching, maintenance and freight yard from the late 1800s until the railroad shut down in the mid-1980s. Some old tracks and rail cars remain from the railroad era with limited remnants of old structures (though most have been razed).

The southwest corner and part of the east edge along Broadway currently host small industrial facilities. The majority of the site has no formal use. The site is neither fenced nor posted with no trespassing signs, and it is common knowledge that the site is used regularly as a campsite for the homeless.

4. Major vegetation types or habitats on site

The site contains seven different habitats, including disturbed upland/grassland, perennial ditches, reed and blackberry thickets, perennial marsh, wet meadow, seasonal wetlands and barren or developed industrial. Most of the site is an occasionally mowed, upland plain with mounds of fill and old debris scattered around the uplands. Dominants are non-native grasses, especially sweet vernal grass (*Anthoxanthum odoratum*), with a wide variety of weeds. The occasional mounds are dominated by the same species, plus dense Himalaya blackberry (*Rubus discolor*). Several drainage ditches are found throughout the site. The margins of these steep-sided ditches support dense cover by perennial grasses and rushes, with a scattering of willows, with open water in deeper sections and recently cleared areas. Low areas in the south of the property and along drainage ditches support wetland vegetation. These wetlands are dense, mowed stands dominated by common reed (*Phragmites australis*) and Himalaya blackberry. Perennial marsh dominated by cattail (*Typha domingensis*) is found in the southeastern portion of the site. Scrubby wet meadow vegetation occupies several shallow depressions and shallow ditches on fill that are about 1.5-2.5 feet thick above the buried former salt marsh. These areas are saturated in the winter and spring, which favors perennial hydrophytes and excludes most upland species. Annual mowing limits the cover and size of the larger species and favors rhizomatous species, such as the creeping bentgrass (*Agrostis stolonifera*) and horsetail (*Equisetum telmateia*), that co-dominated most of these mowed wetlands. Seasonal wetlands on the site occupy shallow depressions. Vegetation in these shallow, disturbed and mowed wetlands is often sparse but they support a wide variety of mostly non-native weeds and grasses. Some parts of the site are barren or concrete or developed industrial land. These areas are devoid of vegetation with upland soils and they lack any indicators of wetland hydrology.

5. Ecological setting

The site is vacant industrial land (former rail yard) surrounded by other industrial and dock facilities. Humboldt Bay lies just north, west and southwest. Industrial lands transition to

commercial within a few blocks to the east. Areas to the southeast transition rapidly from commercial to mostly residential, while areas farther south are a mix of industrial and commercial.

The site is located on a nearly level plain of fill on former tidal marsh. A large ditch runs through the site from stormdrains (serving the industrial areas) at the south end and spills via flap-gated culverts under Waterfront Drive into the harbor area just beyond the site. The ditch and much of the adjacent ground is low enough for occasional winter flooding and prolonged saturation with shallow groundwater through the summer that sustains deeper-rooted wetland perennials.

II. DELINEATION METHOD

A. Introduction

The project site is within the State Coastal Zone, an area subject to regulation through the State Coastal Act, which is interpreted by the Coastal Commission. The Coastal Act defines "wetland" as follows: "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens." Public Resources Code 30121. The filling of wetlands within the Coastal Zone is strictly regulated. See Public Resources Code 30233.

In delineating the occurrence and extent of wetlands within the Coastal Zone, the Coastal Commission uses the wetland definition provided by the US Fish and Wildlife Service (FWS), which is also used by the California Department of Fish and Game (CDFG). Under this definition, wetlands are areas subject to prolonged inundation, saturation or stream flows. Commission staff has interpreted the FWS approach to be a "1-parameter" test, that is, only one of three wetland parameters (hydrology, vegetation, and soils) need be present to define an area as a wetland for purposes of the Coastal Act, although application is subject to some interpretation.¹ For example, an area dominated by FAC species is not necessarily defined as a wetland (Dixon, John pers. comm.), as it may lack hydrology.

This methodology is intended to include open water ≤ 2 m deep (which lacks soils and vegetation), mudflats, sandbars, intertidal rocks (which lack soils) and other unvegetated habitats, as well as vegetated areas, if subject to prolonged inundation, saturation or stream flows.

B. Method

This delineation applied the Coastal Commission methodology, which utilizes hydric soils, wetland hydrology saturation or inundation, and hydrophytic vegetative criteria (as defined in the U.S. Army Corps of Engineers Delineation Manual), but requires the presence of only one of these parameters in order to classify an area as a wetland.

Boundaries between potential jurisdictional areas and uplands were investigated using the routine on-site assessment procedure, Section D, Subsection 2, page 57 of the 1987 "Corps of Engineers Wetlands Delineation Manual" (Environmental Laboratory 1987; hereafter the Delineation Manual). Dominant plant species, soil characteristics, and hydrology indicators were noted within a 10-foot by 10-foot plot at each sample point (Appendix A contains data sheets).

Wetlands, as defined under the State Coastal Act, are distinguished from uplands on this site by the presence of: (a) hydrophytic vegetation, (b) wetland hydrology, or (c) hydric soils (as defined below).

¹ In contrast, for purposes of Section 404 of the federal Clean Water Act (which prohibits the fill of wetlands and other "waters of the United States" without a permit from the U.S. Army Corps of Engineers), a "wetland" is an aquatic feature that satisfies all three parameters.

1. Hydrophytic Vegetation

Hydrophytic vegetation is dominated by plant species that can tolerate prolonged inundation or soil saturation during the growing season. More than 50% of the dominant species must be wetland indicators of FAC, FACW and OBL for the vegetation to be considered hydrophytic. These wetland indicators, or hydrophytes, are listed in the Delineation Manual as OBL, FACW, and FAC. Other plants are listed as FACU or NI, and unlisted plants are considered as UPL. These abbreviations are defined as follows:

- OBL Obligate Wetland Plants. Plants that occur over 99% of the time in wetlands.
- FACW Facultative Wetland Plants. Plants that occur 67% to 99% of the time in wetlands.
- FAC Facultative Plants. Plants likely to occur 33% to 67% of the time in wetlands.
- FACU Facultative Upland Plants. Plants that occur 1% to 33% of the time in wetlands, but which occur more frequently in uplands.
- NI Non-indicator Plants.
- UPL Upland Plants. Plants that occur less than 1% of the time in wetlands.

Note: The three facultative categories are subdivided by (+) and (-) modifiers. FAC+ species are considered to be wetter (have a greater estimated probability of occurring in wetlands) than FAC species. FAC- species are considered to be drier (have a lesser estimated probability of occurring in wetlands) than FAC species.

2. Hydric Soils

Hydric soils develop under the low oxygen conditions typical of prolonged inundation or saturation, and generally show visible indications of chemical reduction. The hydric nature of a soil is most often indicated by low matrix chromas of 0 to 1, or 2 with mottles, and is determined by comparing the wetted soil with Munsell Soil Color Charts. The hydric nature of a soil may also be indicated by the presence of manganese or iron nodules, or other more subtle characteristics.

3. Wetland Hydrology

Common wetland hydrology indicators demonstrate inundation or saturation and include observations of standing water, saturated soils, algal mats, water-matted detritus, and water stains on rocks or other objects. In evaluating these hydrology indicators some attention must be given to the frequency and duration of inundation, and the effects of recent weather, unusual flooding and climatic fluctuations.

III. DELINEATION RESULTS

A. Potential Coastal Act Wetlands

Most of the potential Coastal Act wetlands at this site are vegetated and have hydric soils, and thus also qualify as wetlands under the Corps methodology – typical of vegetated areas that are subject to prolonged inundation, saturation or stream flows. The only area where Coastal Act and Corps designations differ are open-water areas in the three perennial ditches, which would be wetland under the Coastal Act but “Other Waters” under Corps regulations.² See Figure 2 for the delineation map.

1. Reed and Blackberry Thicket (Mowed)

Total Area: 5.686 acres

Area: 3, 9 and 12

Data point: 7

a. Description

This wetland is a dense, mowed stand of common reed (*Phragmites australis*) and Himalaya blackberry (*Rubus discolor*). It developed in a low area within filled former tidelands, where winter runoff accumulates over shallow groundwater that remains accessible to plants in summer. Though occasionally inundated during major storm runoff events, it is a saturation-driven wetland with the dominant plants rooting through the thin veneer of fill soils into shallow groundwater (which is exposed where three ditches cut several feet down into the buried former tidal plain).

² As noted in Footnote 1, above, the fill of both “wetlands” and “other waters” meeting Army Corps of Engineers definitions requires a Clean Water Act Section 404 permit from the Corps. In turn, the state, acting through the Regional Water Quality Control Boards, must also authorize the fill of any such features, either through its Clean Water Act Section 401 Water Quality Certification process, or through the issuance of Waste Discharge Requirements pursuant to the Porter-Cologne Water Quality Act.



View 1: Mowed reed & blackberry on left beyond the water in ditch 2. (Point 7 is left of mid-photo).

b. Vegetation

The vegetation is hydrophytic with hydrophytes providing 80% of the dominants at the sample point. Seasonal saturation apparently excludes most upland species while the shallow summer groundwater allows common reed (*Phragmites australis*, FACW) and Himalaya blackberry (*Rubus discolor*, FACW) to dominate. When unmowed this area becomes an impenetrable, 2-m tall mass of the reed tangled with thorny blackberry brambles. Dominants of the reed and blackberry thicket are listed in Table 1 below.

Table 1
Dominant Vegetation of the Reed and Blackberry Thicket

<i>Common Name</i>	<i>Scientific Name</i>	<i>Regional Indicator Status</i>
common reed	<i>Phragmites australis</i>	FACW
Himalaya blackberry	<i>Rubus discolor</i>	FACW
Occasional dominants		
creeping bentgrass	<i>Agrostis stolonifera</i>	FACW
horsetail	<i>Equisetum telmateia</i>	OBL
bird's-foot trefoil	<i>Lotus corniculatus</i>	FAC
bindweed	<i>Convolvulus sp.</i>	UPL
Italian ryegrass	<i>Lolium multiflorum</i>	FAC
velvet grass	<i>Holcus lanatus</i>	FAC
curly dock	<i>Rumex crispus</i>	FACW-
Baltic rush	<i>Juncus balticus</i>	OBL
fennel	<i>Foeniculum vulgare</i>	UPL

Recent willows resprouts are also widely scattered thru this wetland, including Sitka willow (*Salix sitchensis*, FACW+) and arroyo willow (*Salix lasiolepis*, FACW).

c. Soil

This area has variable fill soils, generally with chroma 2 with occasional redox concentrations (root oxidation) a combination that commonly indicates winter saturation followed by spring drying typical of seasonal wetlands in California.

d. Hydrology

Hydrology indicators noted in this wetland included root oxidation, vegetation that satisfies the FAC-Neutral Test for wetland hydrology, and shallow summer groundwater (exposed where the ditches cut thru).

e. Summary of Parameter Analysis

This area satisfies all three technical wetland criteria with evidence of hydrophytic vegetation, hydric soils, and wetland hydrology thus qualifying as wetland under both FWS and Corps methodologies.

2. Perennial Ditches

Total Area: 0.975 acres
Areas: 1, 2 and 10
Data points: 1 and 6

a. Description

These ditches were excavated in filled former tideland to provide drainage for much of the site and for industrial areas south of the site (view 1 above). Segment 10 is isolated within the surrounding wetlands; the culvert directs flows under an adjacent abandoned railbed and then thru the intervening wetland to Segment 2. Segment 1 (view 2) carries runoff from 2 and spills, via flap-gated culverts under Waterfront Drive, to the harbor just northwest of the site.

These ditches have all been cut down into the buried former tidal plain, exposing shallow year-round groundwater water. The margins of these ditches support dense cover by perennial grasses and rushes, with a scattering of willows and open water in deeper sections and recently cleared areas.

Functioning as non-tidal sloughs, these ditches qualify as Coastal Act wetlands, while Corps regulations could distinguish open-water portion as Other Waters and the vegetated portions as Corps wetlands.



View 2: Perennial ditch on the northwest edge of the site, with fringe of wetland grasses, rushes, sedges and willows, plus pampas grass on the upland edge.

b. Vegetation

These are steep-sided ditches, with open-water fringed by dense wetland cover of native perennial grasses, sedges and rushes, with occasional willows. All of the dominant are hydrophytes (100%) and are listed in Table 2 below.

Table 2
Dominant Vegetation of the Perennial Ditches

<i>Common Name</i>	<i>Scientific Name</i>	<i>Regional Indicator Status</i>
common reed	<i>Phragmites australis</i>	FACW
Nootka reedgrass	<i>Calamagrostis nutkaensis</i>	FACW
soft rush	<i>Juncus effusus</i>	OBL
Santa Barbara sedge	<i>Carex barbarae</i>	FACW
meadow barley	<i>Hordeum brachyantherum</i>	FACW
Sitka willow	<i>Salix sitchensis</i>	FACW+
arroyo willow	<i>Salix lasiolepis</i>	FACW

c. Soil

Where soils are present, they consist of steep loam fill of ditch banks; some banks have large rip-rap boulders (view 2 above), while some have concrete walls (views 1 and 2). Where soils are present, reducing conditions typical of wetland soils are found, indicated by a matrix of chroma 1 or chroma 2 with rusty redox concentrations.

d. Hydrology

These ditches held standing water toward the end of the dry season (mid fall), with stains on concrete headwalls and boulders indicating prolonged inundation 2-3 feet higher during the wet season. The vegetation also satisfies the FAC-Neutral Test for wetland hydrology with 100% hydrophytes.

e. Summary of Parameter Analysis

These ditches all have wetland hydrology and thus are Coastal Act wetlands with year-round standing water in most areas and at least winter saturation on the edges. The edges generally satisfied all three technical wetland criteria with hydrophytic vegetation (100% hydrophytes), hydric soils and wetland hydrology (thus qualifying as wetlands under both State Coastal Act and Corps regulations). The open-water areas, of course, lacked vegetation; while some artificial edges lacked soils and vegetation with either concrete headwalls or large rip-rap boulders.

3. Perennial Marsh

Total Area: 0.126 acres

Areas: 4

Data points: 8

a. Description

These areas are dominated by cattail (*Typha domingensis*, OBL) sustained by summer water from an off-site source.



View 3: Dense cattails at the south edge of the site.

b. Vegetation

The vegetation is hydrophytic with cattail (*Typha domingensis*, OBL) as the sole dominant.

c. Soil

Soils have very low chroma (0 to 1), which is characteristic of chemical reduction under year-round inundation or saturation and thus are hydric.

d. Hydrology

Direct observation of wetland hydrology included surface saturation and standing water late in the dry season. Indirect indicators of wetland hydrology included water marks (water stains and sediment on vegetation), drift lines (algal mats) and vegetation that satisfied the FAC-Neutral Test for wetland hydrology.

e. Summary of Parameter Analysis

The perennial marsh satisfied all three technical wetland criteria with hydrophytic vegetation, hydric soils, and wetland hydrology.

4. Wet Meadow (Mowed)

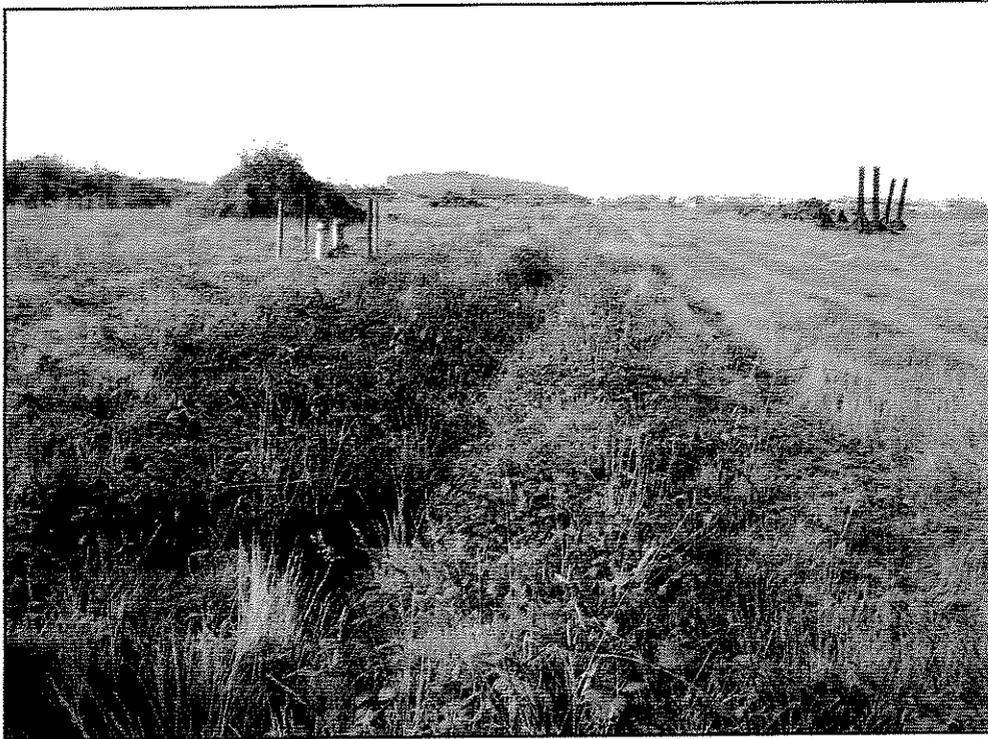
Total Area: 0.921 acres

Areas: 14 to 20

Data points: 3 and 4

1. Description

Scrubby wet meadow vegetation occupies several shallow depressions and shallow ditches on fill that are about 1.5 to 2.5 feet thick above the buried former salt marsh. These areas are saturated (with localized shallow inundation) in the winter and spring, which favors perennial hydrophytes and excludes most upland species. Shallow groundwater in the summer (within the buried salt marsh) would support a dense blackberry and willow scrub with a wide variety of other large perennial hydrophytes but annual mowing limits the cover and size of the larger species and favors rhizomatous species such as the creeping bentgrass (*Agrostis stolonifera*, FACW) and horsetail (*Equisetum telmateia*, OBL) that co-dominate most of these mowed wetlands.



View 4: View of wet meadow in shallow ditch at point 3.

f. Vegetation

Annual mowing of the wet meadows favors rhizomatous dominants and limits the cover and size of larger species that would transform these areas into a dense blackberry and willow scrub.

Sample points pass the wetland vegetation test with hydrophytes comprising 83% of the dominants and they pass the FAC-Neutral Test for wetland hydrology (with 75 to 80% non-FAC hydrophytes). Dominants of the wet meadows are listed in Table 3 below.

Table 3
Dominant Vegetation of the Wet Meadows

<i>Common Name</i>	<i>Scientific Name</i>	<i>Regional Indicator Status</i>
creeping bentgrass	<i>Agrostis stolonifera</i>	FACW
horsetail	<i>Equisetum telmateia</i>	OBL
Himalaya blackberry	<i>Rubus discolor</i>	FACW
Sitka willow	<i>Salix sitchensis</i>	FACW+
arroyo willow	<i>Salix lasiolepis</i>	FACW
tule	<i>Scirpus sp.</i>	OBL
velvet grass	<i>Holcus lanatus</i>	FACW
bird's-foot trefoil	<i>Lotus corniculatus</i>	FAC
spring vetch	<i>Vicia sativa</i>	UPL

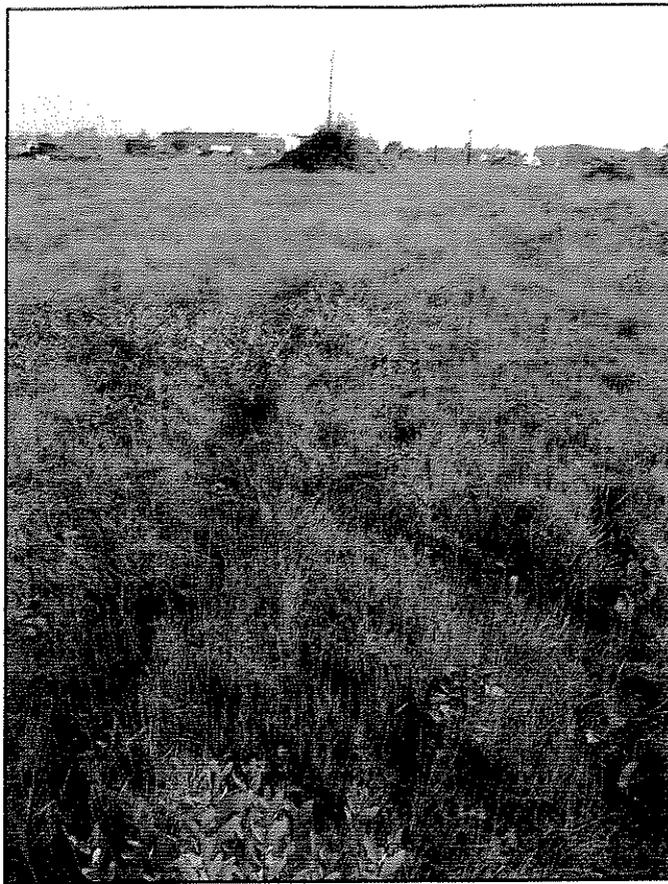
Other species noted in the wet meadows include Baltic rush (*Juncus balticus*, OBL), curly dock (*Rumex crispus*, FACW-), penny-royal (*Mentha puligeum*, OBL), California buttercup (*Ranunculus californicus*, FAC) and celery (*Apium graveolens*, FACW).

g. Soil

Soils of the entire site are fill material, most of loam textures. Soils at the sample points had a chroma of 2 with rusty redox, indicating shallow seasonal saturation with plants providing for localized oxidation (redox features) along some roots.

h. Hydrology

Hydrology indicators noted in the potential wetland areas included sediment and algal mats on vegetation in lower spots, drainage pattern (low, closed depressions), root oxidation and vegetation that satisfies the FAC-Neutral Test for wetland hydrology.



View 5: Wet meadow at point 4 with patches of resprouting willows and some Himalaya blackberry resprouts.



View 6: Low spot in wet meadow with algal mat. May 2006.

i. Summary of Parameter Analysis

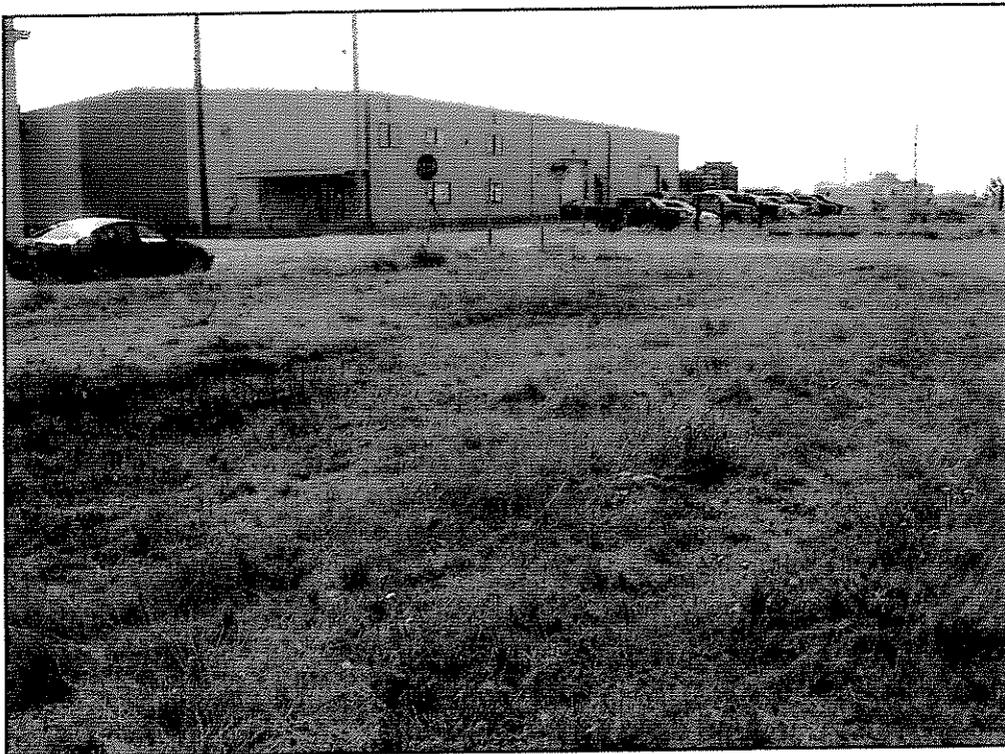
The wet meadow sample points satisfied all three technical wetland criteria with hydrophytic vegetation, hydric soils and wetland hydrology, thus qualifying as wetland under both Coastal Act and Corps guidelines.

5. Seasonal Wetlands

Total Area: 1.053 acres
Areas: 5 to 8, 11 and 21 to 39
Data point: 9

a. Description

The seasonal wetlands on the site occupy shallow depression, with most found on dirt roadways and trails and a few on old asphalt paving with a thin veneer of soil. The vegetation is dominated by low-stature weeds that tolerate dry summer soils, shallow saturation in the winter and spring, compaction and trampling and occasional mowing.



View 7: Seasonal Wetland on compacted soils at point 8.

b. Vegetation

Vegetation in these shallow, disturbed and mowed wetlands is often sparse but they support a wide variety of mostly non-native weeds and grasses. Hydrophytes comprised 100% of dominants at the sample point with vegetation also passing the FAC-Neutral Test for hydrology (with 60% non-FAC hydrophytes). Common dominants of the seasonal wetlands are listed in Table 4 below.

Table 1
Dominant Vegetation of the Seasonal Wetlands

<i>Common Name</i>	<i>Scientific Name</i>	<i>Regional Indicator Status</i>
penny-royal	<i>Mentha puligeum</i>	OBL
Himalaya blackberry	<i>Rubus discolor</i>	FACW
curly dock	<i>Rumex crispus</i>	FACW-
Italian ryegrass	<i>Lolium multiflorum</i>	FAC
bird's-foot trefoil	<i>Lotus corniculatus</i>	FAC

Other species noted in these depressions included hairy cat's-ear (*Hypochoeris radicata*, UPL), bindweed (*Convolvulus* sp., UPL) and hyssop loosestrife (*Lythrum hyssopifolia*, FACW).

c. Soil

Soils in these depressions generally had chroma of 2 with rusty mottles, indicating shallow seasonal saturation with plants providing for localized oxidation (redox features) along some roots.

d. Hydrology

Hydrology indicators noted in these depressions included algal mats, drainage pattern (low, closed depressions), root oxidation and vegetation that satisfies the FAC-Neutral Test for wetland hydrology.

e. Summary of Parameter Analysis

These areas satisfy all three technical wetland criteria, with hydrophytic vegetation, hydric soils, and wetland hydrology, thus qualifying as wetland under both Coastal Act and Corps guidelines.

B. Non-jurisdictional areas

1. Disturbed Upland/Grassland

Data points: 2, 5 and 10

a. Description

Most of the site is an occasionally mowed, upland plain, and much is compacted from past and ongoing traffic. Mounds of fill and old debris are scattered around the uplands. Dominants are non-native grasses, especially sweet vernal grass (*Anthoxanthum odoratum*, UPL), with a wide variety of weeds. The occasional mounds are dominated by the same species plus dense Himalaya blackberry. Dominants noted in these uplands are listed in Table 5 below.

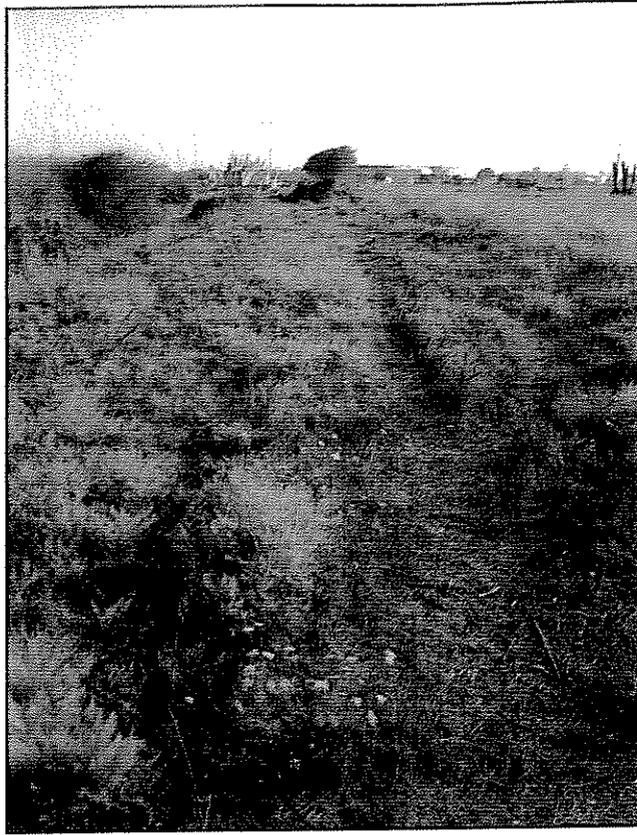
Table 5
Dominant Vegetation of the Disturbed Upland/Grassland

Common Name	Scientific Name	Regional Indicator Status
sweet vernal grass	<i>Anthoxanthum odoratum</i>	UPL
fennel	<i>Foeniculum vulgare</i>	UPL
quaking grass	<i>Briza maxima</i>	UPL
soft chess	<i>Bromus hordeaceus</i>	FACU-
ripgut grass	<i>Bromus diandrus</i>	UPL
Italian ryegrass	<i>Lolium multiflorum</i>	FAC
hairy cat's-ear	<i>Hypochoeris radicata</i>	UPL
Queen Anne's lace	<i>Daucus carota</i>	UPL
Himalaya blackberry	<i>Rubus discolor</i>	FACW
English plantain	<i>Plantago lanceolata</i>	FAC-

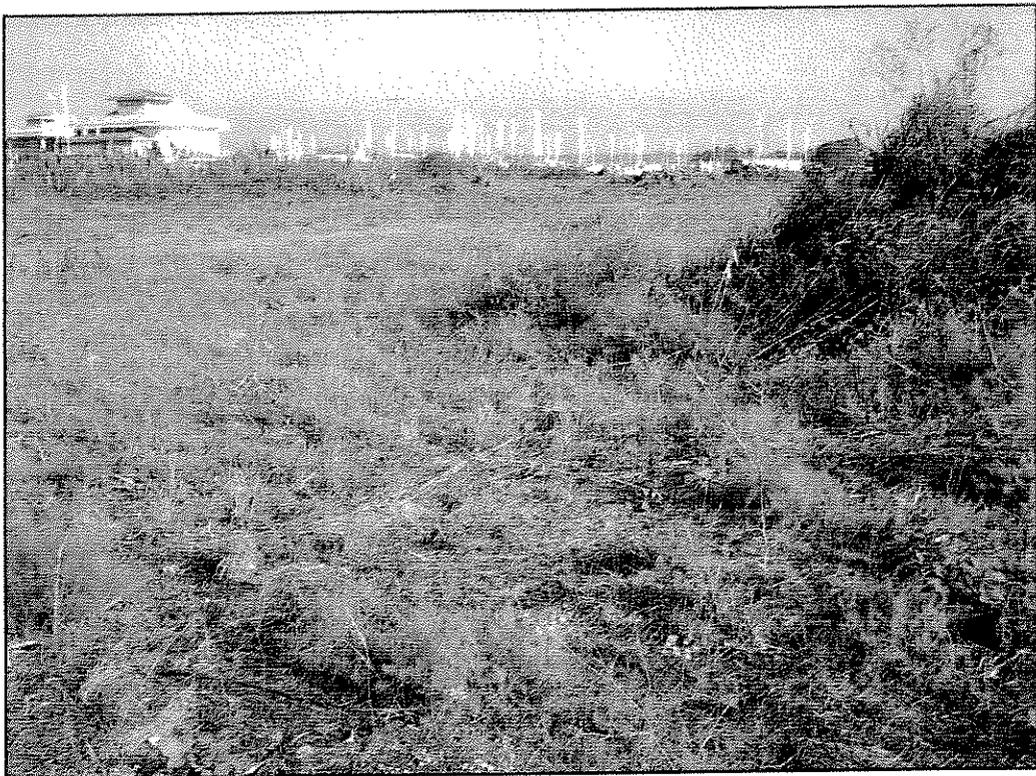
Other prominent species in the uplands included coyote bush (*Baccharis pilularis*, UPL), sweet pea (*Lathyrus odoratus*, UPL), orchard grass (*Dactylis glomerata*, UPL), velvet grass (*Holcus lanatus*, FACW), slender wild oat (*Avena barbata*, UPL), dandelion (*Taraxacum officinale*, UPL), white clover (*Trifolium repens*, FACU), medusae-head grass (*Taeniatherum caput-medusae*, UPL), cut-leaved geranium (*geranium dissectuim*, UPL), hare barley (*Hordeum murinum*, NI), spring vetch (*Vicia sativa*, UPL), winter vetch (*Vicia villosa*, UPL), sheep sorrel (*Rumex acetosella*, FAC-), yellow clover (*Trifolium dubium*, FACU), bur clover (*Medicago polymorpha*, UPL), radish (*Raphanus sativus*, UPL), pampas grass (*Cortaderia selloana*, UPL), bellardia (*Bellardia trixago*, UPL) and parentucellia (*Parentucellia viscosa*, UPL).

b. Summary of Parameter Analysis

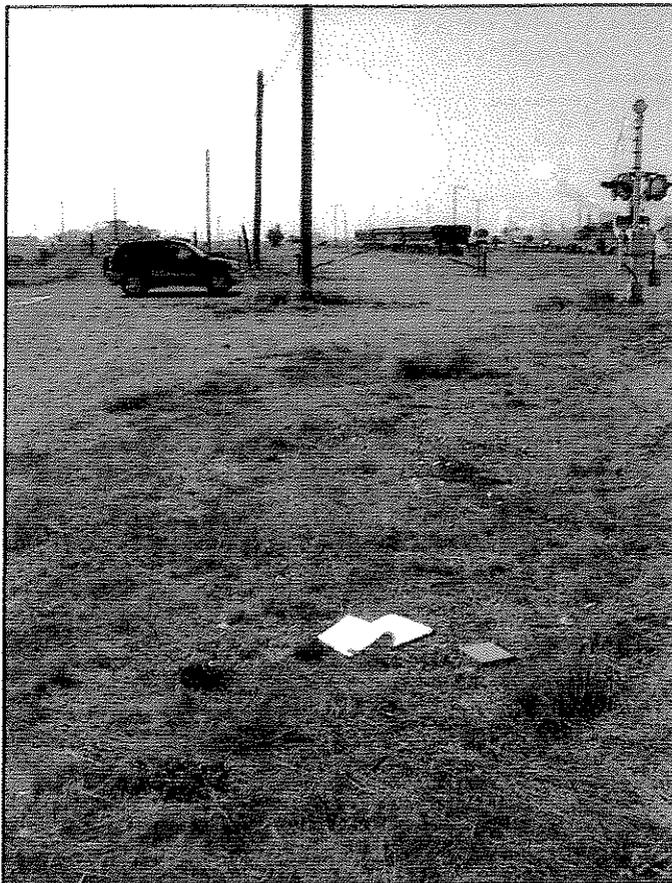
These areas satisfy none of the technical wetlands criteria; upland species are dominant (i.e., the vegetation is not hydrophytic), soil colors are too high (chroma 2 with no mottles) and there are no hydrology indicators.



View 8: Upland at sample point 2.



View 9: Upland at sample point 5, just above wet meadow.



View 10: Upland at sample point 9.

2. Barron/concrete/industrial

Data points: None

a. Description

Some parts of the site are barren or concrete or developed industrial land.

b. Summary of Parameter Analysis

These areas are devoid of vegetation with upland soils and they lack any indicators of wetland hydrology.



View 11: View of southwest corner of site, looking south.

IV. REFERENCES

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- SCS, 1986. Hydric Soils: California. Soil Conservation Service, USDA.

Appendix A
Delineation Data Sheets

Zentner & Zentner Wetland Determination Form

Data Pt 1

Project/Site: Balloon Tract
 County, State: Humboldt CA
 Applicant: Dyerson Investment
 Observer(s): D. Selt
 Date: 10-2-06
 Community: Perennial Ditch
 Atypical?: yes
 Normal?: no
 Explain: channel excavated in fill on former

COVER CLASSES

- 5 = 75-100%
- 4 = 50-75%
- 3 = 25-50%
- 2 = 5-25%
- 1 = many-5%
- + = few
- r = one

PHI
 125ft wide
 open water
 with narrow
 fringe of
 wet meadow

old
 fill on former
 tidelands
 (most is open water)

VEGETATION	Species per 10' x 10' sample	Cover Class	ROIND	Cover Class	ROIND
	NonVegCvr: <u>0</u>				
* sp. 1: *	<u>Cakile mastiglym?</u>	<u>5</u>	<u>FACW</u>	sp. 11: _____	_____
* sp. 2: *	<u>Juncus balticus</u>	<u>2</u>	<u>OBL</u>	sp. 12: _____	_____
* sp. 3: *	<u>Hordeum brachy.</u>	<u>1</u>	<u>FACW</u>	sp. 13: _____	_____
* sp. 4: *	<u>Carex garb.</u>	<u>2</u>	<u>FACW</u>	sp. 14: _____	_____
* sp. 5: *	<u>Salix stichensis</u>	<u>+</u>	<u>FACW+</u>	sp. 15: _____	_____
sp. 6: _____	_____	_____	_____	sp. 16: _____	_____
sp. 7: _____	_____	_____	_____	sp. 17: _____	_____
sp. 8: _____	_____	_____	_____	sp. 18: _____	_____
sp. 9: _____	_____	_____	_____	sp. 19: _____	_____
sp. 10: _____	_____	_____	_____	sp. 20: _____	_____

5/5* 5/5*

Percent of dominants* (excluding NI) which are hydrophytes (OBL, FACW, and/or FAC): 100%

Rationale: Hydrophytes exceed 50% of dominants* Is the vegetation hydrophytic? yes

SOILS

Soil Series: <u>rip-rap of large boulders</u>	<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
Sample Depth: _____	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Redox Concentrations / Depletions
Texture: _____	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organics / Surface Layer of Sandy Soil
Matrix: _____	<input checked="" type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking / Sandy Soil
Mottle: _____	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> On Local Hydric Soil List
Other Soil: _____	<input type="checkbox"/> Gleyed or Low-Chroma	<input type="checkbox"/> On National Hydric Soil List
	<input type="checkbox"/> Other: _____	

Rationale: No soil at sample point, but inundation present. Is the soil hydric? _____

HYDROLOGY
 Inund./Depth: 1-3+ feet
 Sat./Depth: _____
 OtherHydro: _____

- | | |
|--|---|
| <p>Primary Indicators</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns | <p>Secondary Indicators (2+ required)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Oxidized Root Channels / Top 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Rationale) |
|--|---|

Rationale: inundation Is wetland hydrology present? yes

WETLAND DETERMINATION
 Rationale: satisfies veg & hydrology criteria Is the area a wetland? yes

JURISDICTIONAL DETERMINATION
 Rationale: wetland/CA Coastal Zone reg's Is the area Jurisdictional? yes
 D Selt 10-23-06

Zentner & Zentner Wetland Determination Form

Data Pt
2
R2

Project/Site: Balloon
 County, State: Humboldt, CA
 Applicant: P. Person
 Observer(s): D Seff
 Date: 10-2-06
 Community: Disturbed Upland/Grassland
 Atypical?: yes
 Normal?: yes
 Explain: mowed (# early summer)

COVER CLASSES
 5 = 75-100%
 4 = 50-75%
 3 = 25-50%
 2 = 5-25%
 1 = many-5%
 + = few
 r = one

VEGETATION	Species per 10' x 10' sample	Cover Class	ROIND	Cover Class	ROIND
	NonVegCvr: <u>0</u>				
* sp. 1*	<u>Anthoxanthum od.</u>	<u>5</u>	<u>FACU</u>		
* sp. 2*	<u>Eriogonum vult.</u>	<u>3</u>	<u>FACU</u>		
* sp. 3*	<u>Daucus caryota</u>	<u>2</u>	<u>UPL</u>		
* sp. 4*	<u>Covraderia selli</u>	<u>1</u>	<u>UPL</u>		
* sp. 5*	<u>Rubus procerus</u>	<u>1</u>	<u>FAC</u>		
* sp. 6*	<u>Baccharis pilularis</u>	<u>1</u>	<u>UPL</u>		
* sp. 7*	<u>BRIZA MAXIMA</u>	<u>1</u>	<u>UPL</u>		
sp. 8:					
sp. 9:					
sp. 10:					
sp. 11:					
sp. 12:					
sp. 13:					
sp. 14:					
sp. 15:					
sp. 16:					
sp. 17:					
sp. 18:					
sp. 19:					
sp. 20:					

4* 0/6*

Percent of dominants* (excluding NI) which are hydrophytes (OBL, FACW, and/or FAC): 1490

Rationale: Hydrophytes do NOT exceed 50% of dominants* Is the vegetation hydrophytic? No

SOILS

Soil Series: compact
 Sample Depth: 0-11 9" loam
 Texture: loam
 Matrix: 10YR 5/2
 Mottle: none
 Other Soil: _____

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma
- Concretions
- Redox Concentrations / Depletions
- High Organics / Surface Layer of Sandy Soil
- Organic Streaking / Sandy Soil
- On Local Hydric Soil List
- On National Hydric Soil List
- Other: _____

Rationale: chroma is too high Is the soil hydric? No

HYDROLOGY

Inund./Depth: no
 Sat./Depth: no
 OtherHydro: none

- Primary Indicators
- Inundated
 - Saturated in Upper 12 inches
 - Water Marks
 - Drift Lines
 - Sediment Deposits
 - Drainage Patterns

- Secondary Indicators (2+ required)
- Oxidized Root Channels / Top 12"
 - Water-Stained Leaves
 - Local Soil Survey Data
 - FAC-Neutral Test 0 of 6* = 0%
 - Other (Explain in Rationale)

Rationale: No indicators Is wetland hydrology present? No

WETLAND DETERMINATION

Rationale: satisfies None of technical criteria Is the area a wetland? No

JURISDICTIONAL DETERMINATION

Rationale: Upland Is the area Jurisdictional? No
D Seff 10-23-06

Zentner & Zentner Wetland Determination Form

Data Pt
3

Project/Site: Balloon
 County, State: Humboldt, CA
 Applicant: Person
 Observer(s): D. Scott
 Date: 10-2-06
 Community: Wet meadow
 Atypical?: no
 Normal?: no
 Explain: ditch in compacted fill

COVER CLASSES
 5 = 75-100%
 4 = 50-75%
 3 = 25-50%
 2 = 5-25%
 1 = many-5%
 + = few
 r = one

± 10' wide wet mduw
ditch is shallow
± 3' wide

VEGETATION	Species per 10' x 10' sample	Cover Class	ROIND	Cover Class	ROIND
	NonVegCvr: <u>0</u>				
* sp. 1: *	<u>Agrostis stolon</u>	<u>5</u>	<u>FACW</u>		
* sp. 2: *	<u>Scleropogon</u>	<u>2</u>	<u>OBL</u>		
* sp. 3: *	<u>Rubus discolor</u>	<u>3</u>	<u>FACW</u>		
* sp. 4: *	<u>Holcus lanus</u>	<u>2</u>	<u>FACW</u>		
* sp. 5: *	<u>Lolium cornic.</u>	<u>1</u>	<u>FAC</u>		
* sp. 6: *	<u>Vicia sativa</u>	<u>1</u>	<u>UPL</u>		
sp. 7:					
sp. 8:					
sp. 9:					
sp. 10:					

Percent of dominants* (excluding NI) which are hydrophytes (OBL, FACW, and/or FAC): 5 of 6*
83%

Rationale: Hydrophytes exceed 50% of dominants* Is the vegetation hydrophytic? yes

SOILS

Soil Series: <u>old fill</u>	<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
Sample Depth: <u>0"</u>	<input type="checkbox"/> Histic Epipedon	<input checked="" type="checkbox"/> Redox Concentrations / Depletions
Texture: <u>loam</u>	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> High Organics / Surface Layer of Sandy Soil
Matrix: <u>10YR 3/2</u>	<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Organic Streaking / Sandy Soil
Mottle: <u>rusty</u>	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> On Local Hydric Soil List
Other Soil: _____	<input checked="" type="checkbox"/> Gleyed or Low-Chroma <u>No</u>	<input type="checkbox"/> On National Hydric Soil List
		Other: _____

Rationale: low chroma with mottles Is the soil hydric? yes

HYDROLOGY

Inund./Depth: no
 Sat./Depth: at 10"
 Other/hydrol: _____

Primary Indicators	Secondary Indicators (2+ required)
<input type="checkbox"/> Inundated	<input checked="" type="checkbox"/> Oxidized Root Channels / Top 12"
<input checked="" type="checkbox"/> Saturated in Upper 12 inches	<input type="checkbox"/> Water-Stained Leaves
<input type="checkbox"/> Water Marks	<input type="checkbox"/> Local Soil Survey Data
<input type="checkbox"/> Drift Lines	<input checked="" type="checkbox"/> FAC-Neutral Test <u>4 of 5* = 80%</u>
<input type="checkbox"/> Sediment Deposits	<input type="checkbox"/> Other (Explain in Rationale)
<input checked="" type="checkbox"/> Drainage Patterns	

Rationale: several indicators Is wetland hydrology present? yes

WETLAND DETERMINATION

Rationale: satisfies all 3 criteria Is the area a wetland? yes

JURISDICTIONAL DETERMINATION

Rationale: wetland @ CA Coastal Zone reg's. Is the area Jurisdictional? yes
DSH 10-23-06

Zentner & Zentner Wetland Determination Form

Data Pt
4
PHY

Project/Site: Balloon
 County, State: Humboldt CA
 Applicant: Pierson
 Observer(s): D SPH
 Date: 10-7-06
 Community: Wet Meadow
 Atypical?: yes (on fill)
 Normal?: no
 Explain: mowed field

COVER CLASSES
 5 = 75-100%
 4 = 50-75%
 3 = 25-50%
 2 = 5-25%
 1 = many-5%
 + = few
 r = one

VEGETATION	Species per 10' x 10' sample	Cover Class	ROIND	COVER CLASS	ROIND
* sp. 1: *	<u>Agrostis</u>	<u>3</u>	<u>FACU/OBL</u>	sp. 11: <u>Daucus carota</u>	<u>+</u> <u>UPL</u>
* sp. 2: *	<u>Festuca ovina</u>	<u>3</u>	<u>OBL</u>	sp. 12: _____	_____
* sp. 3:	<u>Cladonia</u>	<u>1</u>	<u>FAC</u>	sp. 13: _____	_____
* sp. 4:	<u>Rubus procerus</u>	<u>2</u>	<u>FAC</u>	sp. 14: _____	_____
* sp. 5: *	<u>Vicia sativa</u>	<u>2</u>	<u>UPL</u>	sp. 15: _____	_____
* sp. 6: *	<u>Salix sitchensis</u>	<u>2</u>	<u>OBL</u>	sp. 16: _____	_____
sp. 7:	<u>Juncus patens</u>	<u>+</u>	<u>OBL</u>	sp. 17: _____	_____
sp. 8:	<u>Festuca ovina</u>	<u>+</u>	<u>UPL</u>	sp. 18: _____	_____
sp. 9:	<u>Foeniculum vulg</u>	<u>+</u>	<u>FACU</u>	sp. 19: _____	_____
sp. 10: *	<u>Folcus gnatus</u>	<u>1</u>	<u>FACU?</u>	sp. 20: _____	_____

5/6* 4/5*

Percent of dominants* (excluding NI) which are hydrophytes (OBL, FACW, and/or FAC):

5/6* = 83%

Rationale: Hydrophytes exceed 50% of dominants* Is the vegetation hydrophytic? yes

SOILS

Soil Series: old fill
 Sample Depth: old fill
 Texture: sandy loam
 Matrix: 10% R 3/2
 Mottle: rusty
 Other Soil: _____

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- Gleyed or Low-Chroma
- ___ Concretions
- Redox Concentrations / Depletions
- ___ High Organics / Surface Layer of Sandy Soil
- ___ Organic Streaking / Sandy Soil
- ___ On Local Hydric Soil List
- On National Hydric Soil List
- ___ Other: _____

Rationale: low chroma with redox

Is the soil hydric? yes

HYDROLOGY

Inund./Depth: no
 Sat./Depth: no
 Other/Hydro: 2+

Primary Indicators

- ___ Inundated
- ___ Saturated in Upper 12 inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- Drainage Patterns

Secondary Indicators (2+ required)

- Oxidized Root Channels / Top 12"
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- FAC-Neutral Test 4 of 5* = 80%
- ___ Other (Explain in Rationale)

low, shallow depression on fill.

Rationale: several indicators

Is wetland hydrology present? yes

WETLAND DETERMINATION

Rationale: satisfies All 3 criteria

Is the area a wetland? yes

JURISDICTIONAL DETERMINATION

Rationale: Wetland @ CA Coastal Zone Reg's

Is the area Jurisdictional? yes

D SPH 10/23/06

Zentner & Zentner Wetland Determination Form

Data Pt

5
Ph5

Project/Site: Balloon
 County, State: Fremont Co, WY
 Applicant: Pirvecia
 Observer(s): D Seif
 Date: 10-2-06
 Community: Disturbed Upland/Grassland
 Atypical?: yes
 Normal?: no
 Explain: weed-whacked in early summer

COVER CLASSES

5 = 75-100%
 4 = 50-75%
 3 = 25-50%
 2 = 5-25%
 1 = many-5%
 + = few
 r = one

VEGETATION	Species per 10' x 10' sample	Cover Class	ROIND	Cover Class	ROIND
	NonVegCvr: <u>0</u>				
* sp. 1:*	<u>Anthoxanthum o.</u>	<u>4</u>	<u>FACU</u>	sp. 11:	
* sp. 2:*	<u>Foeniculum v.</u>	<u>4</u>	<u>UPL</u>	sp. 12:	
* sp. 3:*	<u>Sweet pea</u>	<u>2</u>	<u>UPL</u>	sp. 13:	
* sp. 4:*	<u>Rubus proceru</u>	<u>3</u>	<u>FAC</u>	sp. 14:	
* sp. 5:*	<u>Dactylis glom.</u>	<u>2</u>	<u>UPL</u>	sp. 15:	
* sp. 6:*	<u>Bromus diandru</u>	<u>3</u>	<u>UPL</u>	sp. 16:	
sp. 7:*	<u>Falcois lanatus</u>	<u>1</u>	<u>FACU</u>	sp. 17:	
sp. 8:	<u>Galium multifl</u>	<u>4</u>	<u>FAC</u>	sp. 18:	
sp. 9:	<u>Plantago lance.</u>	<u>4</u>	<u>FAC</u>	sp. 19:	
sp. 10:*	<u>Elymus great</u>	<u>1</u>	<u>FACU?</u>	sp. 20:	

$\frac{1}{10} * \frac{2}{7} *$

Percent of dominants* (excluding NI) which are hydrophytes (OBL, FACW, and/or FAC): 17%

Rationale: Hydrophytes do Not exceed 50% of dominants Is the vegetation hydrophytic? No

SOILS

Soil Series: _____
 Sample Depth: old fill
 Texture: old fill s/z
 Matrix: 10 yr s/z loam
 Mottle: _____
 Other Soil: sandy

____ Histosol
 ____ Histic Epipedon NO
 ____ Sulfidic Odor
 ____ Aquic Moisture Regime
 ____ Reducing Conditions
NO Gleyed or Low-Chroma

____ Concretions
 ____ Redox Concentrations / Depletions
 ____ High Organics / Surface Layer of Sandy Soil
 ____ Organic Streaking / Sandy Soil
 ____ On Local Hydric Soil List
 ____ On National Hydric Soil List
 Other: _____

Rationale: Chroma is too high. Is the soil hydric? No

HYDROLOGY

Inund./Depth: NO
 Sat./Depth: NO
 OtherHydro: few

Primary Indicators

Inundated
 Saturated in Upper 12 inches
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns
high ground & mounds

Secondary Indicators (2+ required)

Oxidized Root Channels / Top 12"
 Water-Stained Leaves
 Local Soil Survey Data
 FAC-Neutral Test 2 of 7* = 29%
 Other (Explain in Rationale)

Rationale: No indicators Is wetland hydrology present? No

WETLAND DETERMINATION

Rationale: Satisfies None of criteria. Is the area a wetland? No

JURISDICTIONAL DETERMINATION

Rationale: upland Is the area Jurisdictional? No

D Seif 10-23-06

Zentner & Zentner Wetland Determination Form

Data Pt

Project/Site: Balloon
 County, State: Humboldt CA
 Applicant: P. Soff
 Observer(s): P. Soff
 Date: 10-2-06

COVER CLASSES

- 5 = 75-100%
- 4 = 50-75%
- 3 = 25-50%
- 2 = 5-25%
- 1 = many-5%
- + = few
- r = one

6
716

Community: Open-water & Phragmites/Parrotia Ditch
 Atypical?: yes
 Normal?: no
 Explain: channel excavated in fill on former tideland

VEGETATION	Species per 10' x 10' sample	Cover Class	ROIND	Cover Class	ROIND
	NonVegCvr:	<u>2</u>			
* sp. 1:	<u>Phragmites</u>	<u>5</u>	<u>FACW</u>	sp. 11:	
* sp. 2:	<u>Galium aparine nat.</u>	<u>1</u>	<u>FACW</u>	sp. 12:	
* sp. 3:	<u>Salix stich?</u>	<u>1</u>	<u>FACW+</u>	sp. 13:	
sp. 4:				sp. 14:	
sp. 5:				sp. 15:	
sp. 6:				sp. 16:	
sp. 7:				sp. 17:	
sp. 8:				sp. 18:	
sp. 9:				sp. 19:	
sp. 10:				sp. 20:	

3/3* 3/3*

Percent of dominants* (excluding NI) which are hydrophytes (OBL, FACW, and/or FAC):

3 of 3*
100%

Rationale: 100% hydrophytes.

Is the vegetation hydrophytic?

yes

SOILS

Soil Series: _____
 Sample Depth: _____
 Texture: clay
 Matrix: _____
 Mottle: _____
 Other Soil: _____

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Reducing Conditions
- Gleyed or Low-Chroma
- Concretions
- Redox Concentrations / Depletions
- High Organics / Surface Layer of Sandy Soil
- Organic Streaking / Sandy Soil
- On Local Hydric Soil List
- On National Hydric Soil List
- Other: _____

Rationale:

inundated

Is the soil hydric?

yes

HYDROLOGY

Inund./Depth: 1-5'
 Sat./Depth: _____
 OtherHydro: _____

Primary Indicators

- Inundated
- Saturated in Upper 12 inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns

Secondary Indicators (2+ required)

- Oxidized Root Channels / Top 12"
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Rationale)

3 of 3* = 100%

Rationale:

inundated in dry season.

Is wetland hydrology present?

yes

WETLAND DETERMINATION

Rationale:

veg & hydrology criteria are met.

Is the area a wetland?

yes

JURISDICTIONAL DETERMINATION

Rationale:

wetland @ CA Coastal Zone Reg's

Is the area Jurisdictional?

yes

D Soff 10-23-06

Zentner & Zentner Wetland Determination Form

Data Pt

Project/Site: Balloon
 County, State: Humboldt CA
 Applicant: Piersey
 Observer(s): D. Saff
 Date: 10-2-06
 Community: reed & Blackberry Thicket/Mowed
 Atypical?: NO
 Normal?: NO
 Explain: mowed; on old fill over former tidal marsh.

COVER CLASSES
 5 = 75-100%
 4 = 50-75%
 3 = 25-50%
 2 = 5-25%
 1 = many-5%
 + = few
 r = one

no photo
(see mid/back ground @ Ph. 6)

VEGETATION	Species per 10' x 10' sample	Cover Class	ROIND	COVER CLASS	ROIND
	NonVegCvr: <u>0</u>				
* sp. 1:	<u>Phragmites commun</u>	<u>5</u>	<u>FACW?</u>		sp. 11: _____
* sp. 2:	<u>Rubus praeceus</u>	<u>3</u>	<u>FAC</u>		sp. 12: _____
* sp. 3:	<u>Agrostis</u>	<u>3</u>	<u>FACW or</u>		sp. 13: _____
* sp. 4:	<u>Urtica cornici</u>	<u>2</u>	<u>FAC</u>		sp. 14: _____
* sp. 5:	<u>Convolvulus sp.</u>	<u>2</u>	<u>UPC</u>		sp. 15: _____
sp. 6:	<u>Lolium multifl.</u>	<u>1</u>	<u>FAC</u>		sp. 16: _____
sp. 7:	<u>Holcus lanatus</u>	<u>1</u>	<u>FACW</u>		sp. 17: _____
sp. 8:	_____	_____	_____		sp. 18: _____
sp. 9:	_____	_____	_____		sp. 19: _____
sp. 10:	_____	_____	_____		sp. 20: _____

4/5* 3/3*

Percent of dominants* (excluding NI) which are hydrophytes (OBL, FACW, and/or FAC):

4 of 5*
80%

Rationale: Hydrophytes exceed 50% of dominants*

Is the vegetation hydrophytic?

yes

SOILS

Soil Series: old fill
 Sample Depth: 0"
 Texture: clay loam + rubble
 Matrix: 10YR 3/1
 Mottle: rusty redox
 Other Soil: _____

Histosol
 Histic Epipedon
 Sulfidic Odor
 Aquic Moisture Regime
 Reducing Conditions
 Gleyed or Low-Chroma

Concretions
 Redox Concentrations / Depletions
 High Organics / Surface Layer of Sandy Soil
 Organic Streaking / Sandy Soil
 On Local Hydric Soil List
 On National Hydric Soil List
 Other: _____

Rationale: low chroma with redox feature.

Is the soil hydric?

yes

HYDROLOGY

Inund./Depth: no
 Sat./Depth: no
 OtherHydro: several

Primary Indicators

Inundated
 Saturated in Upper 12 inches
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns

Secondary Indicators (2+ required)

Oxidized Root Channels / Top 12"
 Water-Stained Leaves
 Local Soil Survey Data
 FAC-Neutral Test
 Other (Explain in Rationale)

3 of 3* = 100%

Rationale: several indicators

Is wetland hydrology present?

yes

WETLAND DETERMINATION

Rationale: meets all 3 criteria

Is the area a wetland?

yes

JURISDICTIONAL DETERMINATION

Rationale: wetland @ CA Coastal Zone Reg's DSAff 10-23-06

Is the area Jurisdictional?

yes

Zentner & Zentner Wetland Determination Form

Data Pt
6

Project/Site: Baldon Tract
 County, State: Humboldt CA
 Applicant: Pierseley
 Observer(s): D. Seff
 Date: 10-2-06
 Community: Perennial Marsh
 Atypical?: yes
 Normal?: no
 Explain: on old fill

COVER CLASSES
 5 = 75-100%
 4 = 50-75%
 3 = 25-50%
 2 = 5-25%
 1 = many-5%
 + = few
 r = one

VEGETATION	Species per 10' x 10' sample	Cover Class	ROIND	Cover Class	ROIND
* sp. 1:	* <u>Typha dom.</u>	<u>5</u>	<u>OBL</u>		
sp. 2:					
sp. 3:					
sp. 4:					
sp. 5:					
sp. 6:					
sp. 7:					
sp. 8:					
sp. 9:					
sp. 10:					
sp. 11:					
sp. 12:					
sp. 13:					
sp. 14:					
sp. 15:					
sp. 16:					
sp. 17:					
sp. 18:					
sp. 19:					
sp. 20:					

1/1* 1/1*

Percent of dominants* (excluding NI) which are hydrophytes (OBL, FACW, and/or FAC): 100%

Rationale: 100% OBL

Is the vegetation hydrophytic? yes

SOILS

Soil Series: old fill
 Sample Depth: 6"
 Texture: clay loam
 Matrix: low IR III
 Mottle: none
 Other Soil: _____

Histosol
 Histic Epipedon
 Sulfidic Odor
 Aquic Moisture Regime
 Reducing Conditions
 Gleyed or Low-Chroma low
 Concretions
 Redox Concentrations / Depletions
 High Organics / Surface Layer of Sandy Soil
 Organic Streaking / Sandy Soil
 On Local Hydric Soil List
 On National Hydric Soil List
 Other: _____

Rationale: low chroma

Is the soil hydric? yes

HYDROLOGY

Inund./Depth: ✓
 Sat./Depth: ✓
 OtherHydro: ✓

Primary Indicators

Inundated
 Saturated in Upper 12 inches
 Water Marks
 Drift Lines
 Sediment Deposits
 Drainage Patterns

Secondary Indicators (2+ required)

Oxidized Root Channels / Top 12"
 Water-Stained Leaves
 Local Soil Survey Data
 FAC-Neutral Test 100% OBL
 Other (Explain in Rationale)

Rationale: inundation, saturation, etc...

Is wetland hydrology present? yes

WETLAND DETERMINATION

Rationale: satisfies All 3 criteria

Is the area a wetland? yes

JURISDICTIONAL DETERMINATION

Rationale: Wetland

Is the area Jurisdictional? yes

D Seff 10-23-06

Zentner & Zentner Wetland Determination Form

Data Pt

Project/Site: Balloon
 County, State: Humboldt CA
 Applicant: P. Self
 Observer(s): P. Self
 Date: 10-2-06

COVER CLASSES

5 = 75-100%
 4 = 50-75%
 3 = 25-50%
 2 = 5-25%
 1 = many-5%
 + = few
 r = one

9
PH7

Community: Seasonal Wetland
 Atypical?: yes
 Normal?: no
 Explain: mowed; on old fill over former tidal marsh.

VEGETATION	Species per 10' x 10' sample	Cover Class	ROIND	Cover Class	ROIND
* sp. 1:	<u>Mentha pulgaria</u>	<u>1</u>	<u>swaguel</u>		
* sp. 2:	<u>Cyperus eragrostis</u>	<u>4</u>	<u>OBL</u>		
* sp. 3:	<u>Rumex crispus</u>	<u>2</u>	<u>FACW+</u>		
* sp. 4:	<u>Galium aparine</u>	<u>2</u>	<u>FACW-</u>		
* sp. 5:	<u>Hypochaeris rad.</u>	<u>1</u>	<u>UPL</u>		
* sp. 6:	<u>Lotus corn.</u>	<u>2</u>	<u>FAC</u>		
* sp. 7:	<u>Convolvulus sp.</u>	<u>1</u>	<u>UPL</u>		
sp. 8:					
sp. 9:					
sp. 10:					
sp. 11:					
sp. 12:					
sp. 13:					
sp. 14:					
sp. 15:					
sp. 16:					
sp. 17:					
sp. 18:					
sp. 19:					
sp. 20:					

5/5* 3/5*

Percent of dominants* (excluding NI) which are hydrophytes (OBL, FACW, and/or FAC):

5 of 5
100%

Rationale: Hydrophytes exceed 50% of dominants Is the vegetation hydrophytic? yes

SOILS

Soil Series: loamy gravel
 Sample Depth: fill
 Texture: fill
 Matrix: fill
 Mottle: 10yr 3/2 ox.
 Other Soil: with root

- Histosol
- Histic Epipedon
- Sulfidic Odor
- Aquic Moisture Regime
- Redding Conditions
- Gleyed or Low-Chroma
- Concretions
- Redox Concentrations / Depletions
- High Organics / Surface Layer of Sandy Soil
- Organic Streaking / Sandy Soil
- On Local Hydric Soil List
- On National Hydric Soil List
- Other: _____

Rationale: redox features

Is the soil hydric? yes

HYDROLOGY

Inund./Depth: no
 Sat./Depth: no
 Other/hydrol: several

Primary Indicators

- Inundated
- Saturated in Upper 12 inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns

Secondary Indicators (2+ required)

- Oxidized Root Channels / Top 12"
- Water-Stained Leaves
- Local Soil Survey Data
- FAC-Neutral Test
- Other (Explain in Rationale) 60% matted debris

Rationale: several indicators depression on compacted fill. Is wetland hydrology present? yes

WETLAND DETERMINATION

Rationale: satisfies All 3 criteria.

Is the area a wetland? yes

JURISDICTIONAL DETERMINATION

Rationale: wetland @ CA Coastal Zone Reg's
D Self

Is the area Jurisdictional? yes

10-23-06