

DELINEATION OF WETLANDS AND DEEPWATER HABITATS

GIACOMINI WETLAND RESTORATION PROJECT

MARIN COUNTY, CALIFORNIA



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INTRODUCTION

This report describes the methods and results of a delineation of wetlands potentially subject to oversight by the California Coastal Commission and National Park Service (Park Service) for the Giacomini Wetland Restoration Project (Project). Point Reyes National Seashore (Seashore), a unit of the Park Service, will be preparing an Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for this Project. The Project Area is located in the southern portion of the Tomales Bay watershed in the county of Marin west of the town of Point Reyes Station and east of the town of Inverness Park (Figure 1). It incorporates the Giacomini Ranch proper, Olema Marsh, portions of Levee and Bear Valley Road, and undiked marsh areas directly adjacent to the Giacomini Ranch. The Delineation Study Area expands the Project Area by including areas directly adjacent that might be impacted by restoration activities (Figures 1 and 2).

The Project proposes to restore natural hydrologic and ecological processes and functions to a historic coastal marsh that was diked in the 1940s for operation of a dairy. The Park Service purchased the Waldo Giacomini dairy ranch (Giacomini Ranch) in 2000 for the purpose of wetland restoration. Since that time, the Park Service has been working on assessing existing conditions and initiating the planning process. As part of the EIS/EIR, the Seashore must consider whether this Project could impact sensitive vegetation communities such as wetlands, as well as special status wildlife and plant species, water quality, and other environmental and socioeconomic factors. A preferred restoration alternative has not been selected yet, however, most of the alternatives involve some degree of topographic and hydrologic alternation, including levee removal, partial breaching, lowering or regarding of levees, excavation of tidal channels, revegetation with native plant species, etc.

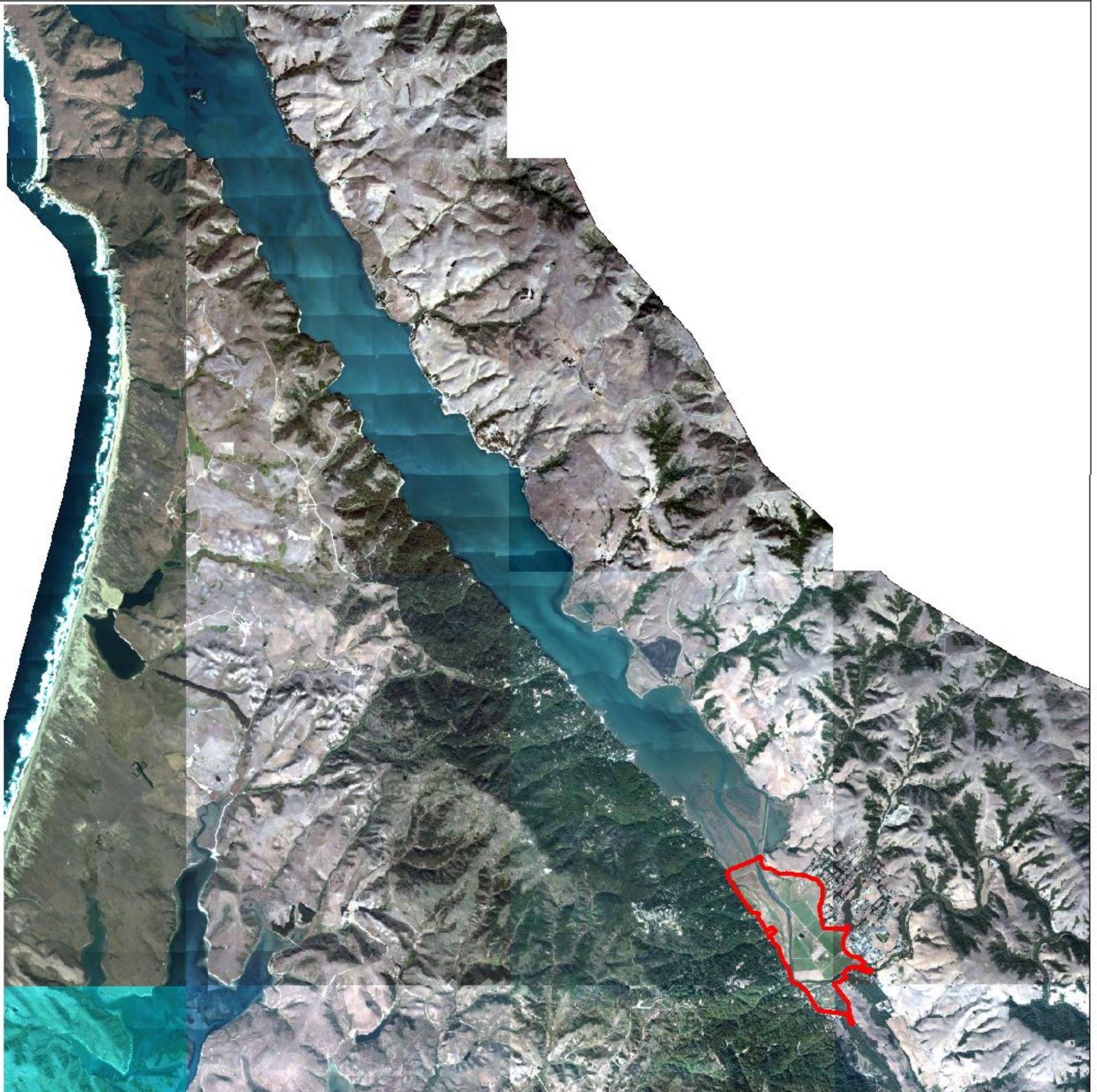
The goal of this study was to map and describe areas within the Delineation Study Area potentially subject to Park Service Director's Order #77-1 and oversight by the California Coastal Commission under the federal Coastal Zone Management Act. A separate report was prepared that assesses acreage of waters potentially subject to regulation by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act (Parsons 2005). Information from these reports will be used to assess in the environmental document potential impacts of these restoration activities on existing wetlands and waters.

Background Information on Project and Project Area

The Park Service is proposing a 563-acre wetland restoration project at the Giacomini Ranch and Olema Marsh in the southern end of Tomales Bay in Marin County, California (Figure 1). The Park Service acquired the 563-acre Giacomini Ranch in February 2000 through a combination of Congressional appropriations and funding from the California

Giacomini Wetland Restoration Project

Project Location - southern Tomales Bay, Marin County



0.4 0 0.4 0.8 Miles

A horizontal scale bar with markings at 0, 0.4, and 0.8 miles.

Map Location

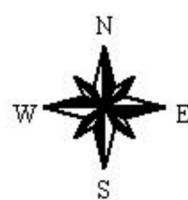
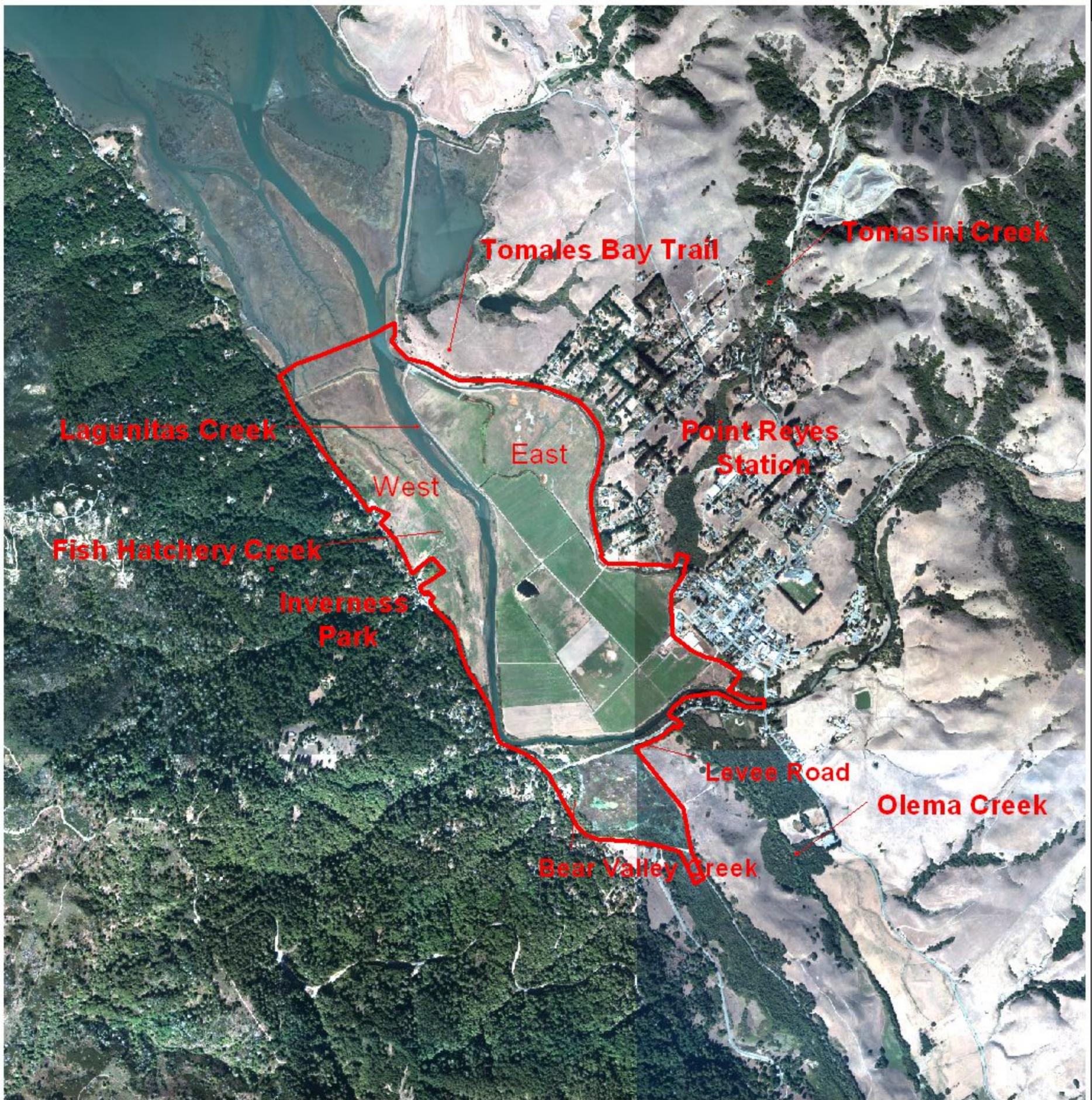


National Park Service
Golden Gate National Recreation Area/
Point Reyes National Seashore
Point Reyes Station, Calif.
County of Marin

Figure 1. Location of Giacomini Wetland Restoration Project in southern Tomales Bay.

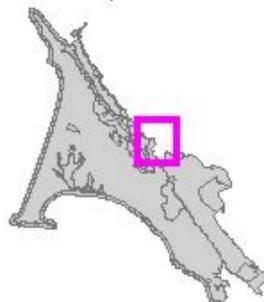
Giacomini Wetland Restoration Project

Delineation Study Area



1000 0 1000 2000 Feet

Map Location



National Park Service
Golden Gate National Recreation Area/
Point Reyes National Seashore
Point Reyes Station, Calif.
County of Marin

Figure 2. Giacomini Wetland Restoration Project Delineation Study Area

Department of Transportation (CalTrans). The Giacomini Ranch is located in the north district of the Golden Gate National Recreation Area (GGNRA), which is administered by the Seashore. The Giacomini family has been operating a dairy ranch on this property since the 1940s when they constructed levees on Lagunitas Creek and, later in the 1960s, Tomasini Creek. Prior to that, the mouth of the Tomales Bay watershed was largely a combination of subtidal and intertidal habitat, with the latter increasing substantially after the 1860s due to increased sedimentation caused by watershed disturbances such as logging, agriculture, etc. As part of the purchase agreement with the Giacomini family, the Giacomini family was granted a reservation of use agreement until 2007 on approximately 463 acres. The remaining 100 acres are already under Park Service management. These 100 acres are located in the northwestern corner of the Project Area in the northern portion of the West Pasture: Lagunitas Creek bisects the pasturelands into two pasture areas that have been termed the East and West Pastures (Figure 1).

Since purchase of the property in 2000, the Seashore has been moving forward with the environmental planning process. Baseline studies on existing wildlife, vegetation, wetland, and cultural resources have been or are being conducted. Through integration of this baseline information with restoration science tenets, Park Service directives and management policies, and mitigation and contractual obligations, the Seashore has identified one primary project objective -- specifically, restoration of natural hydrologic tidal and freshwater processes, thereby enabling restoration of ecological processes and functions. Public and agency scoping for the environmental document -- a joint EIS/EIR -- ended in January 2003. State ownership of land below the Ordinary Higher Water mark in Lagunitas Creek triggered the need to conduct a joint federal/state planning process. State Lands Commission agreed to participate in the planning process as the lead California Environmental Quality Act (CEQA). The Park Service will act as the lead National Environmental Policy Act (NEPA) agency and principal project manager. Two of the alternatives include restoration in Olema Marsh, a 63-acre freshwater marsh that is owned by the non-profit organization, Audubon Canyon Ranch. Restoration would require alteration to Levee Road and possibly Bear Valley Road and the White House Pool County park that is owned by the state of California Wildlife Conservation Board and leased by the County of Marin Parks and Open Space District. The Park Service has been working collaboratively with Audubon Canyon Ranch, the County of Marin Public Works department, and the Open Space district, as well as the Gulf of the Farallones National Marine Sanctuary, whose jurisdiction includes Tomales Bay, throughout the environmental planning process.

In 2003, the Park Service held a series of internal workshops designed to prioritize restoration objectives based on a number of factors, including mitigation requirements, project Purpose, project Goals, and scoping comments and concerns. A hydrologic consulting firm was hired in spring 2003 to investigate existing hydrologic conditions and to develop and perform hydrodynamic modeling of preliminary restoration and public access concepts. During spring 2004, the Park Service conducted a number of workshops with adjacent landowners, regulatory agencies, local and state agencies and organizations, the general public and wetland restoration experts. The objective of these workshops was to gather feedback from these various groups on the preliminary

restoration and public access concepts and to use this feedback to refine alternatives prior to inclusion and analysis in the environmental document. At this point, the Seashore has finalized the restoration components, but is still collecting information regarding technical feasibility and land use/noise impacts that will better enable the Park Service to refine the public access component.

The restoration and public access concepts developed to date involve various degrees of hydraulic and/or topographic alterations, such as partial levee breaching; complete levee removal; lowering and regrading levees; removal of tidegates, spillways and other infrastructure; removal of sediment to lower elevations; installation of larger culverts or bridges; construction of paved or unpaved paths and viewing platforms/elevated overlooks; revegetation of selected areas; creation of freshwater marsh, and creation of high marsh or upland areas to serve as high tide refugia habitat for bird species such as black rails and the California clapper rail. The Seashore anticipates that, due to construction timing constraints, restoration will probably be phased over a three-year period, with restoration on the 100 acres already managed by the Park Service planned for 2006. Preparation of the environmental document will begin in spring 2005.

MATERIALS AND METHODS

Compliance with Federal Policies, Laws, and Regulations

Park Service Director's Order #77-1

Director's Order #77-1 established Park Service policies, requirements, and standards for implementing Executive Order 11990 (Protection of Wetlands; 42 Fed. Reg. 26961). Executive Order 11990 was issued by the President "...to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct and indirect support of new construction in wetlands wherever there is a practicable alternative..." In compliance with this Executive Order, the Park Service adopted a policy of "no net loss of wetlands," with a longer term goal of net gain Service-wide. Implementation of this policy meant that, for new development or new activities, the Park Service pledged to avoid adverse wetland impacts to the extent practicable, minimize impacts that could not be avoided, and compensate for remaining unavoidable adverse impacts through restoration of degraded wetlands at a 1:1 ratio. Unlike Section 404 of the Clean Water Act, adverse impacts under Executive Order 11990 are not interpreted strictly as discharge of dredged or fill material, but encompass a much broader range of actions, including groundwater withdrawals, water diversions, nutrient enrichment, livestock grazing, pumping, flooding, and impounding.

To delineate which areas would be subject to Director's Order #77-1, the Park Service elected to use the classification system developed by the U.S. Fish and Wildlife Service (FWS), "Classification of Wetlands and Deepwater Habitats of the United States," (FWS/OBS-79/31; Cowardin et al. 1979), as the standard for inventory and classification of wetlands. This system is typically referred to as the Cowardin classification system. Since 2000, the Seashore and the Golden Gate National Recreation Area (GGNRA) have been conducting an inventory of wetlands in high priority watersheds or portions of watersheds within their boundaries using the Cowardin classification system or a modified version of this system.

Coastal Zone Management Act

Within California, the California Coastal Commission (CCC) administers the state program (California Coastal Act) for implementation of the federal Coastal Zone Management Act (CZMA). Any action by a federal agency such as the Park Service requires a federal consistency determination by the CCC as required by CZMA. The CCC reviews all proposed development projects within the California coastal zone, which, in many areas of the state, is effectively bounded to the east or inland by Highway One. The California Coastal Act (Coastal Act; 1976) directs each of the 73 cities and counties lying wholly or partially within the coastal zone to prepare a Local Coastal Program (LCP) Certification and Amendment Process. These LCPs must include regulatory policies concerning wetlands that are consistent with the Coastal Act. The Coastal Act Section 30121 broadly defines a wetland as:

Wetland means 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, or fens.

However, the CCC Administrative Regulations (Section 13577(b)) provides a more explicit explanation:

Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats.

In the coastal zone, the CCC, with assistance from the California Department of Fish and Game (CDFG), is responsible for determining the presence and size of wetlands subject to regulation under the Coastal Act. The CCC has adopted the CDFG wetland definition and classification system, which is a modified version of the Cowardin classification system.

Wetland Definition/Delineation

Cowardin/FWS

The Cowardin system was developed primarily to serve as a foundation for the national wetlands mapping project known as the National Wetlands Inventory (NWI; Cowardin et al. 1979). As part of this effort, the FWS developed the following definition of wetlands:

Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification system, wetlands must have one or more of the following attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year (Cowardin et al. 1979).

While this definition appears to imply that areas need only to meet one of the three parameters to qualify as a wetland, the FWS has subsequently clarified that the true Cowardin system requires the presence of wetland hydrology **and either** the presence of hydric soils **or** hydrophytic vegetation, except in nonsoil areas, such as rocky intertidal areas, where only the presence of proper hydrology is required (Tiner 1989). In order to

be considered a wetland, areas must be “subjected to periodic inundation and/or soil saturation or be covered by shallow water,” whether wetland vegetation and/or hydric soils are present or not (Tiner 1989). The FWS did not provide any quantitative measure for the term “periodic.” Relative to the Corps’ delineation methodology, the FWS definition is generally regarded as being more inclusive in the delineation and subsequent classification of a wetland (CCC 2002).

The Seashore is currently using the Cowardin/FWS definition to delineate areas potentially subject to oversight and management by the Park Service. Initially, the Seashore and GGNRA adopted a one-parameter approach to defining and delineating wetlands, but found that this approach incorporated too many coastal upland areas that were not wetlands, but simply dominated by mesic plant species adapted to the cool coastal climate. It attempted to correct for this problem by mapping based on predominance of hydrophytic species with FACW or OBL indicator status, but has elected recently to align its methodology with that used by other units in the Park Service, which relies on two parameters. Consistent with the FWS methodology, an area must have wetland hydrology **and** hydrophytic vegetation or hydric soils to qualify as a wetland. As part of its methodology, the Seashore has provided some quantitative measures for evaluating whether an area meets two of the three parameters – vegetation, soils, and hydrology. Most of these criteria are based on the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands (Federal Interagency Committee for Wetland Delineation 1989), which was never formally adopted by the committee.

Hydrology. An area exhibits wetland hydrology characteristics if it is inundated or if the soil is saturated at a sufficient frequency and duration to support wetland vegetation during the growing season under normal circumstances. The wetland hydrology criterion is met if standing water or saturated soils persist for seven (7) to 10 consecutive days during the growing season (PRNS May 2000). Areas that are only episodically inundated or saturated or never inundated or saturated are not wetlands. Evidence of wetland hydrology is determined by presence of either one primary indicator or two secondary indicators. Primary hydrologic indicators include standing water, water table within the top 12 inches of the soil surface, or saturation within the top 12 inches of the soil surface, drift lines, sediment depositions, and drainage patterns. Standing water is recorded in inches for the average depth found within the wetland. If standing water is not present, the soil is checked for an elevated water table and/or saturation in the upper 12 inches. Examination of these indicators requires digging a soil pit to a depth of 16 inches, observing the level at which water stands or saturation occurs in the hole. If no signs of primary hydrologic indicators are present, then, secondary hydrologic indicators are used, which include oxidized root or pore channels, algal matting, water marks/water-stained vegetation, etc. Indirect indicators of hydrology must be interpreted with caution in areas with artificial hydrology such as irrigation.

Vegetation. Plant species identified were assigned a wetland indicator status according to the *National List of Plant Species That Occur in Wetlands: California (Region 0)* (Reed 1988). This indicator status refers to the probability that a particular plant species

is found in wetland habitats within specific regions of the United States and was developed by USFWS in cooperation with a number of federal agencies (Table 1).

Table 1. Wetland indicator status for plant species (Reed 1988; Revised 1996)		
Indicator status	Definition	Frequency of occurrence in wetlands
OBL	Obligate, always found in wetlands	>99 percent
FACW	Facultative wetland, usually found in wetlands	67-99 percent
FAC	Facultative, equal in wetlands or non-wetlands	34-66 percent
FACU	Facultative upland, usually found in non-wetlands	1-33 percent
UPL/NI	Upland/No Indicator, not found in local wetlands	<1 percent

Positive or negative signs are used to more specifically define frequency of occurrence in wetlands. A positive (+) sign indicates a frequency toward the higher end of a category (more frequently found in wetlands), and a negative sign (-) indicates a frequency toward the lower end of a category (less frequently found in wetlands). Some plant species are either not listed (NL), or there is insufficient information available to determine an indicator status (NI: no indicator). The initial plant list was developed in 1988 for Region 10 (California) and other regions in the United States, and a draft revision of this list was released in 1996, but it has not been finalized.

Plants with OBL, FACW, FAC+, and FAC classifications are considered hydrophytic species. In using the routine wetland delineation method described in the 1987 *Manual*, the dominant plants in the area are listed. If more than 50 percent of the dominant species have a wetland indicator status of OBL, FACW, and/or FAC, the wetland vegetation criteria is satisfied.

Hydric Soils. An area exhibits a hydric soil characteristic if it is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor growth and regeneration of hydrophytic vegetation. The National Technical Committee for Hydric Soils has established several criteria for hydric soils, including histosols or organic soils; soils with aquic or periaquic moisture regimes; and soils that are ponded or that are frequently flooded for a long duration during the growing season. Long duration is defined as the period of inundation related to flooding from a single event that persist for 7 days to 1 month in length, and frequently flooded refers to events that occur with a 2-year recurrence interval. A list of hydric soil series, complexes, and taxonomic inclusions for Marin County are found in the Official List of Hydric Soil Map Units for Marin County, California (SCS 1992). Many soil series or complexes will not necessarily be hydric, but will contain hydric inclusions such as drainageways.

Persistent flooding of soils creates anaerobic conditions, which changes the chemistry of the soil, causing a visual change in soil coloration. Oxygen depletion usually makes the soil darker or, in some cases, greyer such as in gleying. When ponded or saturated for long periods, iron can be leached or depleted from the soil. Areas of the soil where

oxygen is introduced either when the soil drains or through oxidation of areas around roots and in pore spaces can lead to oxidation of remaining iron in soils that creates a characteristic red staining commonly referred to as mottling or oxidized pore channels or rhizospheres. The matrix and mottle colors in soils are identified using the Munsell™ Soil Color Chart (Kollmorgen Instruments Corporation 1994). The matrix color is the predominant soil color and mottles are contrasting color spots within the soil matrix. The soil chart characterizes soil color according to hue, value, and chroma. Hue measures the overall soil color, value describes the lightness or darkness of the hue, and chroma describes the amount of grayness in the color (FICWD 1989). Wetland soils are characterized as those with a chroma of (2) if mottles are present and those with a chroma of (0) or (1) if no mottles are present.

The hydric soil criterion is met if soils have low-chroma and/or mottling (described above) and/or other special characteristics such as iron or manganese concretions, gleying, sulfidic odor, high organic content, or organic streaking that has resulted from prolonged inundation or saturation (FICWD 1989).

Modified Cowardin/CDFG

As discussed above, the Cowardin system requires the presence of hydrology and either hydrophytic vegetation or hydric soils and is therefore technically a two-parameter delineation method (Tiner 1989). However, the CCC has adopted the CDFG-modified version of the Cowardin system in which an area needs only to meet one of the three parameters (hydrophytic vegetation, hydric soils or wetland hydrology) to qualify as a wetland.

The CCC bases its jurisdiction over wetlands on a modified Cowardin system developed by CDFG for identification of wetlands and wetland types (Radovich 1993). In contrast to FWS, CDFG asserts that “areas which support at least seasonal dominance by wetland vegetation (hydrophytic vegetation) are wet enough, long enough to competitively preclude year-round dominance by mesophytic and xerophytic vegetation, and are, therefore, classifiable as wetlands” (Radovich 1993). To qualify as wetlands, areas must either have the requisite hydrology or the requisite hydrophytic vegetation on at least a seasonal basis or both. In this instance, hydric soils are considered to be “merely corroborative of requisite hydrology” (Radovich 1993). Hydric soils are classified as those known to be periodically inundated or saturated; those with a chroma of 2 or less; or those known to have a soil association classified as hydric pursuant to standards which have been established by the U.S. Soil Conservation Service (SCS; Radovich 1993). Again, no quantitative measure is provided for the term “periodic.” However, based on the link between dominance by hydrophytic vegetation and presumed hydrology, even areas that are flooded only every five (5) years or that fall within the 250-year-floodplain would qualify as wetlands if hydrophytes “cover a greater area” than non-hydrophytes (Radovich 1993).

Wetland Classification

Cowardin

The FWS developed an elaborate classification system for wetlands and deepwater habitats (Cowardin et al. 1979). The Cowardin classification system is hierarchical, progressing from broad system descriptors to very specific modifiers for water regime, water chemistry, and soils (Cowardin et al. 1979). Wetlands within each System share similar physical, chemical, and biological characteristics. The Systems consist of the coastal wetlands, which include marine and estuarine wetlands, and the interior or non-tidal wetlands, which include Riverine, Lacustrine, and Palustrine wetlands. Some of the Systems are subdivided into Subsystems such as Subtidal and Intertidal (estuarine). Dominant plant life form and physiography and composition of the substrate describe the Class level. Water Regime Modifiers apply to Classes. This category considers specific hydrologic conditions that affect the periodicity and duration of inundation. Special Modifiers describe wetlands that have been created or highly modified by human activities. This includes wetlands that are diked or impounded, excavated, farmed, drained or ditched, grazed by cattle, filled with artificial substrate, or dammed by beavers.

Recently, the FWS has incorporated an additional System, Riparian (Rp), for the western United States (FWS 1997), which encompasses forested areas adjacent to streams and rivers that may not technically function as a wetland, but play an important hydrogeomorphic and ecological function associated with stream and river systems. FWS describes riparian as being closely associated with water and topographic relief, but lacking the duration of water usually present in wetlands (FWS 1997). Within the Delineation Study Area, Riparian polygons were those that supported Scrub Shrub or Forested Class hydrophytic vegetation, but that showed no indication being saturated or inundated within 12 inches of the soil surface for at least 10 days during the growing season. Many of these areas are Intermittently (J) or Temporarily (A) flooded during episodic flood events (recurrence intervals > 2 years) and/or are phreatophytic, meaning that they tap into groundwater tables that are typically greater than 12 inches from the soil surface.

Modified Cowardin

Some projects within the Seashore have required alterations and/or additions to the classification system. While these changes may not necessarily be reflected in this Project, a summary of some of the alterations and/or additions are provided below:

System: For the purposes of this project, the Seashore adopted the proposed Riparian (Rp) System described above.

Subclass. The Seashore added a specific modifier (10) to reflect Scrub Shrub and Forested Classes that combine both deciduous and evergreen species, whether broadleaf or needle leaf.

Water Regime. The greatest number of modifications occurred with the Water Regime Modifiers. Cowardin et al. (1979) encouraged users to develop hydrologic regime modifiers that accurately reflected the area under study. The complex hydrology of the coastal Marin County with its numerous interfaces between perennial and seasonal groundwater seeps and freshwater surface flow and semi-diurnal marine tides spurred the need for both creating new modifiers and combining others. Within Non-Tidal, Water Regime modifiers have been expanded to include combined flooding and saturated regimes such as Saturated-Seasonally (B), Saturated-Permanently (I), Temporarily Flooded/Seasonally Saturated (Ab), Seasonally Flooded/Seasonally Saturated (Eb), Seasonally Flooded/Permanently Saturated (Ei), Phreatophytic (X), and Upland (U). As described earlier, Phreatophytic refers to areas where hydrophytic species rely on groundwater tables that are greater than 12 inches from the soil surface for almost all of the growing season (< 10 days with groundwater table within 12 inches of the soil surface). The code “U” specifically referred to areas where hydrophytic vegetation was present, but there were no direct or indirect indicators of wetland hydrology or reliance on a deeper groundwater table.

Freshwater Tidal regimes were intended by Cowardin et al. (1979) to characterize areas where water levels are subject to the rise and fall of the tides, but the waters are not necessarily tidally mixed or saline as a result of tidal influence. In addition to existing categories of Freshwater Tidal, the Saturated-Tidal (Q) category was added to characterize wetlands that are primarily saturated by freshwater surface or groundwater flow, but are influenced to some degree by tidal action.

Tidal regimes were adjusted to bring individual regimes more into accordance with observed physical tidal datums. Subtidal (L) wetlands are waters that are permanently flooded with tidal water and typically fall below Mean Lower Low Water (MLLW). Subtidal wetlands typically support only submerged communities of plants such as eelgrass (*Zostera marina*). Irregularly Exposed (M) wetlands are areas exposed by the tides less than often than daily and usually range between MLLW and Mean Tide Line (MTL): these areas are typically unvegetated mudflats. Regularly Exposed (N) wetlands are areas that are alternately flooded and exposed at least once daily and fall between MTL and Mean High Water (MHW). Between MTL and MHW, emergent species such as Pacific cordgrass (*Spartina foliosa*) began to colonize what would otherwise be intertidal mudflats. The Irregularly Flooded (P) modifier for tidal regimes was split in two to reflect areas that are flooded at higher high tides, but not necessarily daily, and those that are flooded only by the highest high tides or storm events. In general, the Irregularly Flooded (Pm) regime corresponds with the elevation zone for “mid” tidal salt marsh, which ranges from MHW to Mean Higher High Water (MHHW). The Irregularly Flooded (Ph) regime represents the “high” tidal salt marsh and upland ecotone elevation zone, which falls above MHHW and is only flooded on extreme high tides or higher high tides combined with freshwater storm flows.

Special Modifiers. For the purposes of this project, additional special modifiers were created to designate areas subject to grazing (g) and irrigation (i).

Once a wetland is evaluated and classified, a mapping code is assigned based on the system developed by the National Wetlands Inventory (NWI). This code is derived from the Cowardin system, but has been modified to take into account some of the additional Water Regime and Class modifiers. A detailed description of the modified Cowardin classification hierarchy is provided in Appendix A, and a description of the modified mapping codes is provided in Appendix B.

Literature Review

Prior to conducting field studies, available reference materials were reviewed. These include the National Wetland Inventory (NWI) map for the Inverness quadrangle (April 1991), the Soil Survey of Marin County California (SCS 1985), Hydric Soils List for Marin County (SCS March 1992), and a wetland delineation that was conducted as part of the feasibility study in 1993 (PWA et al. 1993). Information from these types of materials is typically used to help determine where wetlands are likely to occur in the Delineation Study Area prior to field survey.

The NWI maps characterize wetlands and waters of the United States according to the Classification of Wetlands and Deepwater Habitats of the United States developed by USFWS (Cowardin et al. 1979). Wetlands mapped in the NWI are overlaid on top of USGS topographic maps and include wetland and aquatic features other than creeks and drainages. Because NWI is prepared from high-altitude aerial photography, mapped wetlands are typically those that are readily discernible in aerial photographs, such as perennially ponded marshes, stock ponds, lakes, and forested riparian areas along streams and drainages. It is less likely to incorporate seasonal or saturated wetlands that pond only seasonally or are primarily saturated through the growing season and support a low-growing emergent vegetation cover that is indistinct in aerial photographs from adjacent grasslands (e.g., wet meadows, flats, seeps, etc.) The accuracy of NWI maps undoubtedly varies within regions of the United States. A reassessment of a selected portion of one quadrangle (Tomales Point) by the FWS during 2000 using interpretation of a different set of aerial photographs suggested that the initial NWI efforts may have underestimated wetland acreage by as much as 53 percent (David Schirokauer, *pers comm.*). A second component of assessing the adequacy of NWI for the Seashore's wetland inventory involved conducting field investigations of polygons that appeared likely to have wetlands based on the plant communities present (e.g., predominance of rushes and sedges) despite the fact that NWI had mapped no wetlands in the area. As with the FWS remapping, these field efforts again suggested a significant underestimation of wetlands within the Seashore and the north district of GGNRA by NWI.

Other valuable tools in evaluating the potential for wetlands are the Vegetation Communities map for the Project Area (Parsons and Allen 2004) and the Soil Survey of Marin County, California (SCS 1985). The soil survey map can indicate potential areas where hydric soils or soils formed by wetland hydrologic processes exist. These maps either show soil types or series where all the soils within the mapped area have major

horizons that are similar in composition, thickness, or arrangements, they show less definitive grouping such as complexes, which consist of two or more soils or miscellaneous areas that occur in such an intricate pattern or in such small areas that they cannot be shown separately on maps (SCS 1985). Most of these soil series and complexes contain “inclusions” of other soils from other taxonomic classes (SCS 1985). In addition to the soil survey map, the SCS often produces Hydric Soil Lists for each county, which are soils that meet the definition and criteria developed by the National Technical Committee for Hydric Soils (SCS 1992). The list for Marin County was published in 1992. This list specifies which of the soil series, complexes, and inclusions are considered hydric and also describes any “hydric landforms” within these soil groupings such as drainageways, beach, etc.

Field Survey

Lorraine Parsons and Leslie Allen, wetlands ecologists at the Seashore, conducted most of the Cowardin wetland delineation from July to November 2002, with some follow-up work conducted in August and September 2003, June and August 2004, and February 2005. Follow-up work was conducted by Lorraine Parsons, Amelia Ryan, Chelsea Donovan, and Amy Langston, all biologists with the Seashore. Wetlands were delineated based on the Cowardin/Park Service and modified Cowardin/CDFG methodologies described earlier. The specific approaches for applying wetland delineation methodologies are outlined below.

Modified Cowardin/CDFG (CCC)

The Modified Cowardin wetland delineation methodology developed by the CDFG can rely on the presence of one parameter – hydrophytic vegetation **OR** wetland hydrology **OR** hydric soils. Because hydrophytic vegetation abounds within the Seashore, it is likely that the vegetation criterion would be the one most likely met. For this reason, this wetland delineation approach was incorporated into the vegetation mapping effort. Individual polygons were created for differences in vegetation communities or plant associations in areas larger than 10m². At the plant association level, differences related largely to changes in plant species, although it could signify changes in percent cover within the same subset of species (i.e., same species as another polygon, but one is more dominant in this polygon than the other) or changes in total percent vegetation cover. For each polygon, data on vegetation, hydrology, and, occasionally, soils was collected and recorded on datasheets. Dominant and subdominant plant species within each potential wetland feature were identified and listed: a list of all plant species within the Delineation Study Area is provided in Appendix C. In certain areas, sampling of soil was conducted to further evaluate presence of indicators for either wetland hydrology and/or hydric soils. Each polygon was also classified using the Seashore-modified version of the Cowardin system (Cowardin et al. 1979) described earlier. Areas that supported hydrophytic vegetation, but did not appear to have wetland hydrology, were usually assigned Water Regime Modifiers of Temporarily Flooded (A), Intermittently Flooded (J), Phreatophytic (X), or Upland (U). Many of these areas occurred within Riparian Systems. Graphics in this report (Figures 6 – 11) show the modified Cowardin

classification at the System, Subsystem, Class, Subclass, and Water Regime Modifier scale (e.g., E2EM1Pm or PSS3H) for the Delineation Study Area at varying scales. Vegetation mapping/Cowardin datasheets are not included in the report, but are available from the Seashore for review.

Areas potentially subject to CCC jurisdiction were determined by merging all polygons that met at least one wetland criteria – hydrophytic vegetation, wetland hydrology, or hydric soils. Merged polygons included those that supported hydrophytic vegetation, but did not appear to have wetland hydrology: these are designated with the Water Regime modifiers of Temporarily Flooded (A), Intermittently Flooded (J), Phreatophytic (X), Upland (U), or some combination of these. These wetlands have been mapped on a color digital orthoquad aerial photograph using the digitizing tool in GIS (ArcView 3.3; ESRI). Maps were prepared at a scale of at least 1 inch = 250 feet that shows wetlands potentially subject to regulation by the CCC.

Park Service

Park Service lands within the Delineation Study Area generally include the Giacomini Ranch and portions of Bear Valley Creek upstream of Bear Valley Road and the southern 14.0 acres of Olema Marsh. Areas potentially subject to management and oversight as wetlands by the Park Service must meet two criteria: they must have wetland hydrology **AND** they must have hydrophytic vegetation **OR** hydric soils. Because this methodology bears more similarity to the Corps' wetland delineation methodology than the CDFG one, areas potentially subject to management as wetlands by the Park Service were determined through the Corps wetland delineation process, which is described in more detail in Parsons (2005). Where necessary, the boundary for wetlands potentially subject to Corps' jurisdiction was expanded to include areas that only met two, rather than three, criteria. The datasheets prepared as part of the Corps' delineation are included in this report (Appendix D), and, for each point, the Seashore has identified whether it meets Corps', CDFG/CCC, and Park Service wetland delineation criteria. Wetlands potentially subject to management and oversight by the Park Service are mapped on a color digital orthoquad aerial photograph using the digitizing tool in GIS (ArcView 3.3; ESRI). The boundary for these wetlands is included on the same set of maps as that for wetlands potentially subject to CCC oversight. The maps were prepared at a scale of at least 1 inch = 250 feet.

STUDY AREA BACKGROUND

Geology and Soils

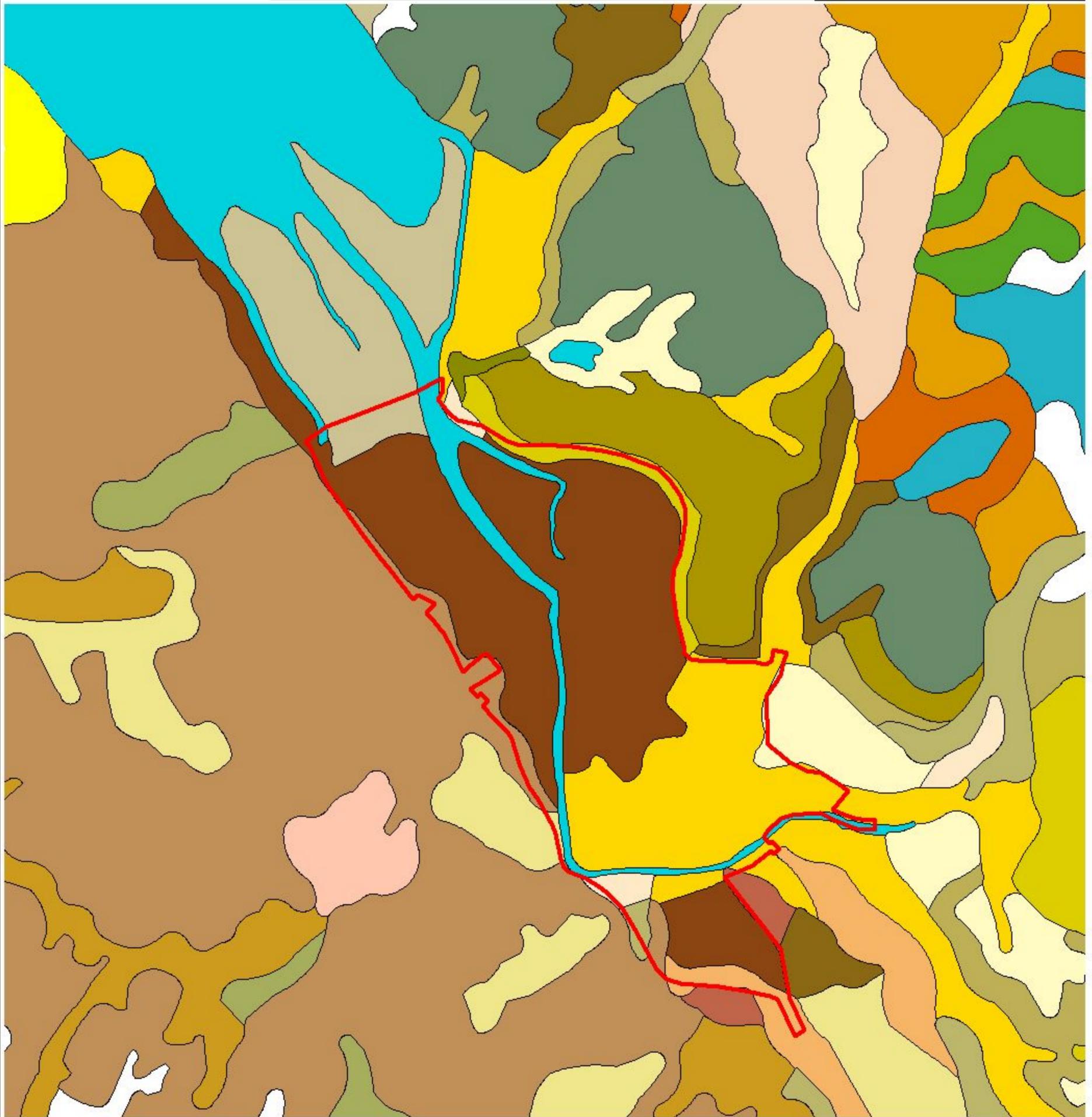
The nature of the Delineation Study Area has been sharply defined by this region's unique geologic and land-use history. The San Andreas Fault, responsible for the 1906 Earthquake that devastated San Francisco, runs directly through the Delineation Study Area and Tomales Bay. Movement of the Pacific and Continental Plates has produced striking differences in the geologic nature of the lands on the west and east sides of Tomales Bay by displacing lands along this major fault as much as several hundred miles (Shuford and Timossi 1989).

The eastern portion of the Tomales Bay watershed is dominated by the Franciscan formation, composed of sandstone, graywacke, shale, some volcanic and metamorphic rock, and greenstone (SCS 1985). The Franciscan Formation is typically associated with the higher elevation ridges, mountains, and hills that run along Marin County's western perimeter. Directly adjacent to the Delineation Study Area lies a lower-elevation coastal terrace known as the Point Reyes Mesa. This stream-shaped marine terrace is composed of marine sediments with layers of gravel alluvium (A.A. Rich and Associates et al. 1987). Soil types mapped along the terrace include Olompali loam and the Saurin-Bonnydoon complex, neither of which are characterized as hydric (SCS 1985; Figure 3). West of Tomales Bay on the steeply sloped Inverness Ridge – and within most of the Seashore – granitic rock such as quartz-diorite and granodiorite dominate, forming the backbone of the Point Reyes Peninsula (SCS 1985). Overlying the granitic rock in most areas are shale, sandstone, porcelanite, and chert, but, in some areas, the dominant parent material is mudstone, siltstone, and greenish sandstone that is referred to as the Drakes Bay or Purisma Formation (SCS 1985). Soils on the portion of the Inverness Ridge directly adjacent to the western boundary of the Delineation Study Area are mainly comprised of the Inverness loam series, ranging from 15 to 75 percent slopes (SCS 1985; Figure 3).

The Delineation Study Area is comprised primarily of low-elevation lands bounded by Inverness Ridge and the Point Reyes Mesa to the west and east and by Bear Valley to the south. Prior to the 1860s, approximately one-third to one-half of the Giacomini Ranch was actually subtidal or unvegetated intertidal habitat (PWA et al. 1993, Niemi and Hall 1996). The historic coastal salt marsh was relegated to the southeastern corner of the Giacomini Ranch near the existing dairy facility and in the Olema Marsh and Olema Creek floodplains (PWA et al. 1993). This marsh complex represented a significant percentage of the existing salt marsh present at that time in Tomales Bay, with tidal influence at that time believing to extend as far south as Bear Valley during storm tides (Evens 1993). However, during the latter half of the 19th century, sedimentation rates rose dramatically, resulting in rapid deltaic aggradation of coarse alluvium in the southern end of Tomales Bay. This increase in sedimentation probably resulted from an increase in logging and other changes in land use practices (PWA et al. 1993, Niemi and Hall

Giacomini Wetland Restoration Project

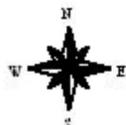
Soil Types



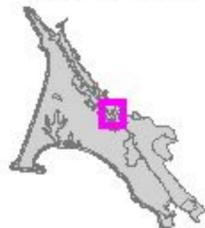
Soil Types

- | | |
|------------------------------------|--|
| Baraboo very gravelly loam (30-50) | Olm pall (15-30) |
| Blackie-Cole complex (2-5) | Rock outcrop-Xerorthents complex (50-75) |
| Cortina gravelly sandy loam (0-5) | Santa-Rosalindoo complex (2-15) |
| Finearts, clay loam | Santa-Rosalindoo complex (15-30) |
| Hydrotherms, saline | Santa-Rosalindoo complex (30-50) |
| Inverness loam (0-15) | Tocaloma-Santa Rosa association, very steep |
| Inverness loam (15-30) | Tocaloma-Santa Rosa association, extremely steep |
| Inverness loam (30-50) | Xerorthents, fill |
| Inverness loam (50-75) | Yorkville clay loam (15-30) |
| Los Osos-Bonnydoon complex (15-30) | Yorkville clay loam (30-50) |
| Los Osos-Bonnydoon complex (30-50) | Water |
| Novato clay | |
| Olm pall loam (2-9) | |
| Olm pall (0-15) | |

Delimitation Study Area



Map Location



National Park Service

Golden Gate National Recreation Area/
Point Reyes National Seashore
Point Reyes Station, Calif.
County of Marin

Figure 3. Soil types in the Giacomini Wetland Restoration Project Delineation Study Area.

1996), but was undoubtedly exacerbated by the geologic instability characteristic of this region. It has been estimated that, between 1860 and 1950, approximately 5 vertical feet of sediment deposited within southern Tomales Bay, creating 650 acres of new vegetated intertidal habitat (PWA et al. 1993). The greatest sedimentation occurred between 1860-1910 (PWA et al. 1993). The 1906 Earthquake may have subsequently “drowned” some of this deltaic aggradation. There were reports in Bolinas Lagoon of subsidence of up to 1 foot, however, evidence of similar subsidence events in Tomales Bay were not as clear-cut (Gilbert 1908). Sedimentation in the delta continued to be high until at least the 1950s, when construction of several dams and reservoirs within the Marin Municipal Water District (MMWD)-owned portion of the Tomales Bay watershed began reducing sediment input (PWA et al. 1993, Niemi and Hall 1996). While dairying first occurred in the Giacomini Ranch area since the early 1900s, Waldo Giacomini and his family increased the land’s agricultural potential by diking approximately 550 acres of deltaic salt marsh that existed in the mid 1940s for a large-scale dairy cattle operation. In the 1960s, the Giacomini family bermed Tomasini Creek, a tributary to Tomales Bay that historically meandered through what became the East Pasture, to run alongside the Point Reyes Mesa and thereby increase the amount of available pastureland.

Sedimentation continued to occur in Olema Marsh after 1950, driven by large, episodic events associated with 1982 and 1998 floods. However, Olema Marsh had already been diked in the early 1900s by construction of Levee Road, which restricted tidal influence and essentially forced this area to convert from a brackish tidal marsh to a freshwater wetland. Following construction of the levee, filling of the lands bayward of the levee also occurred. Bear Valley Creek now flows through an impounded freshwater marsh, Olema Marsh, to Lagunitas Creek through a culvert under Levee Road and a channel that has been excavated in the filled land to the north. As with many artificial systems, functioning of Olema Marsh upstream of Levee Road has deteriorated during recent years due to increased sedimentation within the marsh that has decreased hydraulic capacity and precluded flow through at least one of the culverted drainages. Olema Creek is also culverted underneath Levee Road, however, in recent years, this highly altered stream has started to reclaim its historic floodplain in Stewart’s Flat and possibly reestablish some of the conditions that once led people to refer to this area as Olema Lake.

Soil types mapped within the Delineation Study Area are consistent with this area’s unique history (Figure 3). The primary soil substrate in the northern 60 percent of the Giacomini Ranch and the northern 80 percent of Olema Marsh consists of Novato Clay (SCS 1985). Novato Clay is described as “very deep, very poorly drained soil...in saltwater marshes ...formed in alluvium derived from various kinds of rock” (SCS 1985). It is characterized as hydric, specifically within salt marshes (SCS 1992). The southernmost portion of Olema Marsh, as well as the portion of Bear Valley Creek flowing into the Marsh, consists of Fluvents, channeled, a hydric soil complex commonly formed in floodplains (Figure 3).

The southeastern corner of the Giacomini Ranch, as well as large sections of the land along Levee Road and the southern portion of Lagunitas Creek, is mapped as Blucher

Cole complex (Figure 3; SCS 1985). The Blucher-Cole complex is also formed in alluvium from various kinds of rock, although this mapping unit is typically found in basins and on alluvial fans. Both components of this mapping unit are characterized as very deep soils that are somewhat poorly drained with seasonally high water tables and occasional periods of flooding (SCS 1985). The Blucher component is characterized as hydric, specifically within drainageways (SCS 1992).

Soil borings conducted in 2003, however, indicate that soil patterns within the Giacomini Ranch are much more complex than the soil map would suggest. The historic salt marsh areas in the southern and eastern portions of the East Pasture typically have deep, intermixed estuarine clays and peats overlain with a thin (~0.3 –0.5 m) loam or clayey loam layer (Kamman Hydrology & Engineering (KHE), *in prep.*). The loams probably date to the period in which the Project Area was isolated from tidal and freshwater flow influence and started being actively farmed. The very southern portion of the East Pasture has a very thick (2.5 m) layer of silts and sands that appears to have resulted from the Giacomini's efforts to deliberately direct flood overflows from Lagunitas Creek to this portion of the property (KHE, *in prep.*). Conversely, sediment in many of the historic subtidal areas directly adjacent to historic and current Lagunitas Creek channels are comprised of loam or silty loam overlain on interbedded silt, clays, and sands. This interbedded layer rests on a very deep layer of extremely permeable coarse-grained sands and gravels that were probably deposited by historic bedload and suspended sediment transport during storm events (KHE, *in prep.*).

The undiked salt marsh north of the Giacomini Ranch has been mapped as almost exclusively Hydraquents, saline, with slightly smaller pockets of Novato Clay and Xerorthents, fill, at the base of the Tomales Bay trailhead, directly north of the East Pasture and the outlet of Tomasini Creek into Tomales Bay (Figure 3). Hydraquent, saline, soil types are hydric and consist of “nearly level soils along the coast” typified by “stratified deposits of silt and clay with thin layers of peat” that are “continuously waterlogged” (SCS 1985). Xerorthents, fill, is comprised of soil material that has been moved mechanically and mixed (SCS 1985). This unit was also mapped at the corner of Sir Francis Drake Boulevard and Levee Road near White House Pool and along the northern portion of Bear Valley Road (Figure 4). Xerorthents, fill, is characterized as having a hydric inclusion, Swamps.

Unlike many of the diked salt marshes in San Francisco Bay, the Delineation Study Area does not appear to have subsided much and, in some areas, may have actually aggraded due to episodic sedimentation events, flood overflows, and agricultural activities (e.g., filling, land-leveling). Subsidence or decreases in elevation on the diked Giacomini Ranch may have been minimized by not only the coarse nature of the sediments present, but the relatively rapid pace of deltaic deposition, which probably prohibited substantial vegetation recruitment and dieback and, therefore, formation of undecomposed plant material or “peat” layers. When areas are drained through diking, fine-grained sediments compress, and peat is broken down, leading to compaction of soils and often substantial lowering of elevations. Topographic information suggests that elevations in the northern end are perhaps 1-2 feet lower than the adjacent undiked marsh, while elevations at the

southern end are actually slightly above intertidal elevations. In Olema Marsh, elevations have increased substantially relative to historic conditions, because, at least historically, sediment from Bear Valley Creek naturally deposited in this very “flat” portion or reach of the creek. In addition, large episodic sedimentation events associated with the 1982 and 1998 floods contributed enough alluvium from the Inverness Ridge that the marsh’s geomorphology was dramatically reshaped during this period. For example, following the 1998 flood, the course of Bear Valley Creek shifted from the western to the eastern portion of Olema Marsh.

Hydrology

From an estuarine perspective, the Delineation Study Area represents the mixing zone for oceanic tides from the Pacific Ocean and freshwater fluvial flows from several perennial/seasonal creeks and drainages, including Lagunitas, Olema, Bear Valley, Fish Hatchery, and Tomasini creeks, as well as several smaller drainages (Figure 4). Tomales Bay is characterized as a typical “classic,” winter-stratified estuary, with salinities ranging from freshwater near 0-5 ppt in the winter to brackish and even saline (15-30 ppt) in the summer and fall. Both Fish Hatchery and Tomasini Creeks, which flow through the diked West and East Pastures, respectively, are tidally influenced to some degree, because their so-called “one-way” tidegate or flashboard dam structures are malfunctioning, allowing tidal inflow. The downstream portions of both Olema Creek and Bear Valley Creek are also tidal, although Bear Valley Creek is only tidally influenced in the westernmost portion of the creek (Kamman Hydrology & Engineering, *in prep.*). Another source of freshwater influences within the Study Area is seep flow from groundwater sources along Inverness Ridge and Point Reyes Mesa, which again relates strongly to this area’s unique and unstable geologic history. These seeps either emerge from coarse alluvial layers at the base of the Point Reyes Mesa or the base of Inverness Ridge and then sheetflow out onto the relatively level pastures, drainages, or freshwater marshes (Figure 4). These freshwater influences appear to be mediated to some extent by localized subsidence and a potential influence on the groundwater table within the outer portions of the pasture from Lagunitas Creek, which is tidal (Figure 4). Within the Giacomini Ranch, most of the East Pasture is actively spray- or flood-irrigated during the summer to increase forage for cattle, except for the very northern portion closest to Tomales Bay. The West Pasture is not irrigated.

Vegetation Communities

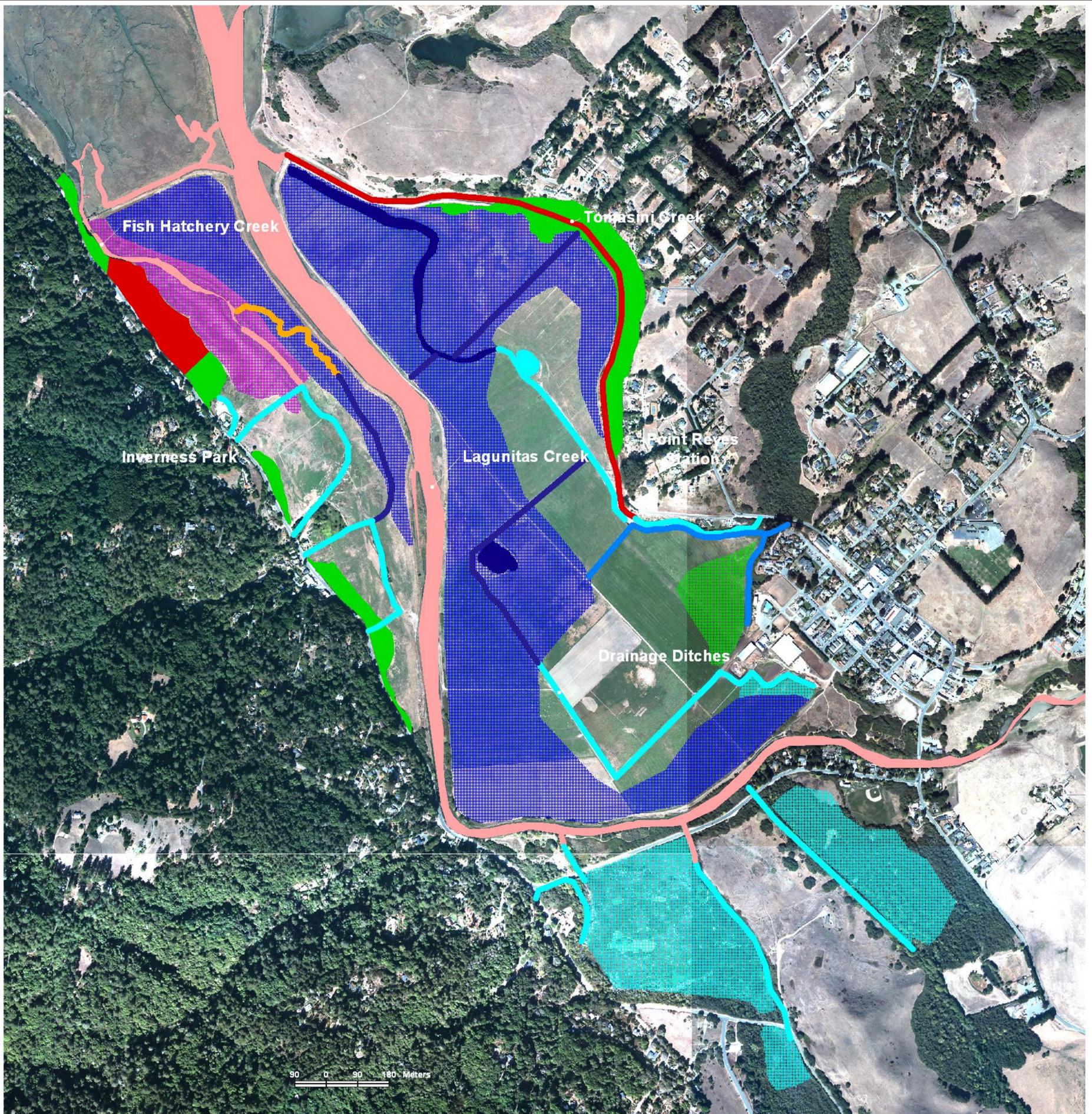
This hydrologic complexity undoubtedly accounts for the wide variety of wetland habitats present in the Delineation Study Area, including freshwater marsh, vernal marsh, seasonal wetland, wet meadow, tidal/diked salt marsh, tidal/diked brackish marsh, moist grassland, scrub-shrub riparian, and forested riparian (Parsons and Allen 2004; Figure 5). Even some of the limited coastal scrub habitat present incorporates a mesic component, with perennial or seasonal seep flow on the Point Reyes Mesa creating a unique vegetation community dominated by both arroyo willow (*Salix lasiolepis*) and coyote brush

Figure

4.

Giacomini Wetland Restoration Project

Sources of Hydrology

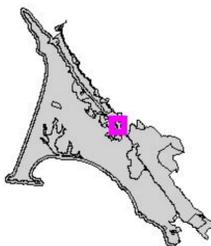


- Hydrologic Sources**
- Groundwater - Freshwater
 - Surface - Freshwater
 - Surface - Freshwater/Groundwater - Freshwater
 - Surface - Freshwater/Groundwater - Tidally Influenced
 - Surface - Tidally Influenced
 - Surface - Tidally Influenced/Groundwater - Freshwater
 - Surface - Tidally Influenced/Groundwater - Tidally Influenced
- Hydrologic Influences**
- Groundwater-Freshwater
 - Groundwater-Tidally Influenced
 - Surface-Freshwater
 - Surface-Tidally Influenced

700 0 700 Feet



Map Location

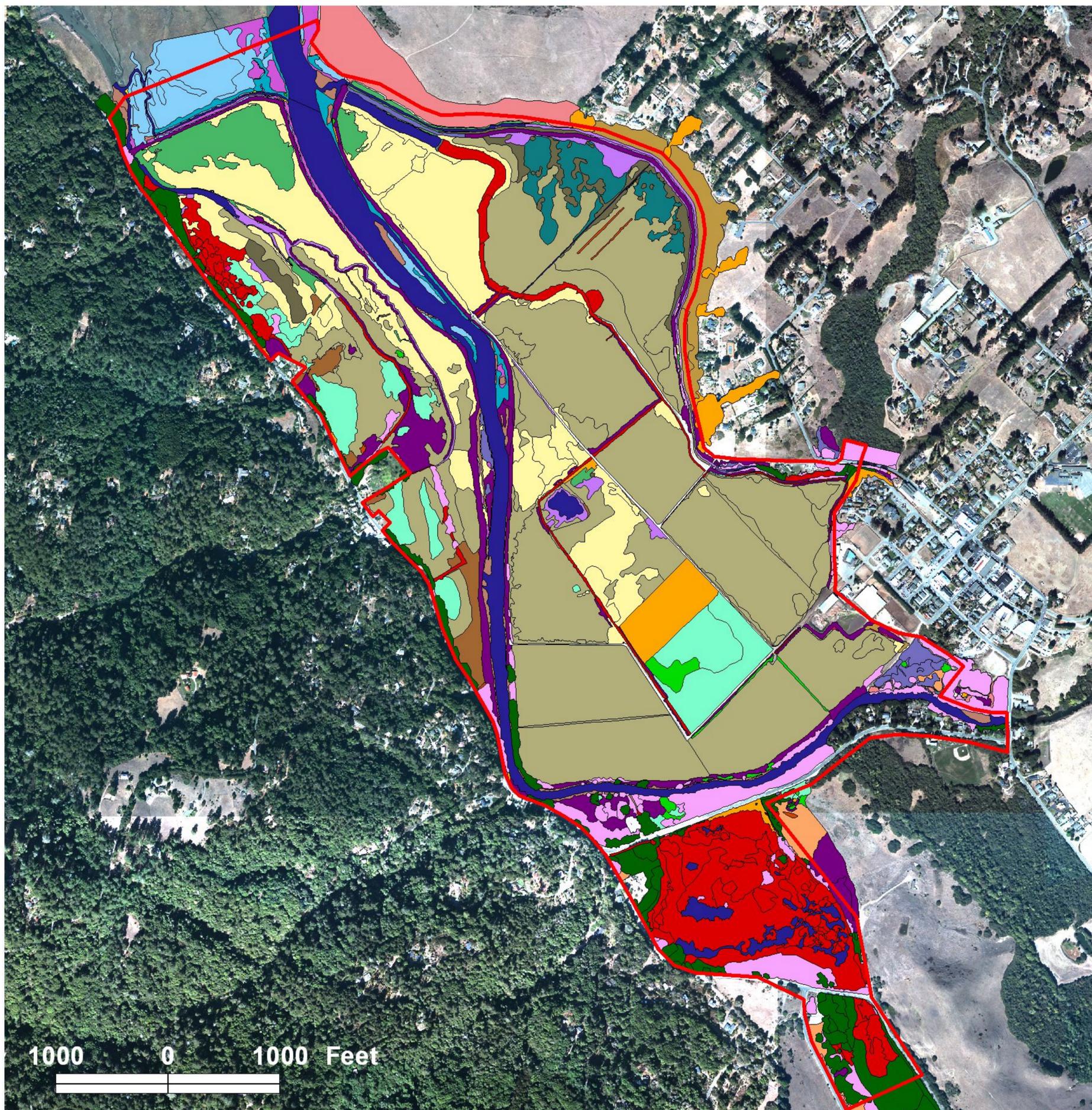


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 Point Reyes National Seashore
 Point Reyes Station, Calif.
 County of Marin

Figure 4. Hydrologic sources in the Giacomini Wetland Restoration Project Delineation Study Area.

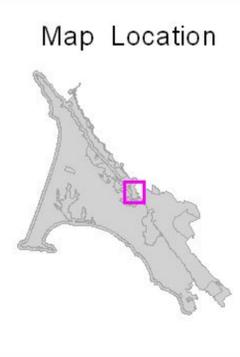
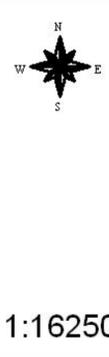
Giacomini Wetland Restoration Project

Vegetation Communities



Vegetation Sub-Alliances

Coyote Brush Coastal Scrub	Ruderal
Diked Brackish Marsh	Salt Marsh Pasture
Diked Salt Marsh-High	Scrub-Shrub Riparian
Diked Salt Marsh-Mid	Seasonal Wetland
Diked Salt Marsh-Mudflat/Panne	Tidal Brackish Marsh
Disturbed	Tidal Salt Marsh-High
Dry Grassland	Tidal Salt Marsh-High/Upland
Dry Pasture	Tidal Salt Marsh-Low
Forested Riparian	Tidal Salt Marsh-Mid
Freshwater Marsh	Unvegetated
Mesic Coastal Scrub	Vernal Marsh
Moist Grassland	Wet Meadow
Moist Meadow	Wet Pasture
Open Water	



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Figure 5. Vegetation sub-alliances or habitat types within the Giacomini Wetland Restoration Project Delineation Study Area.

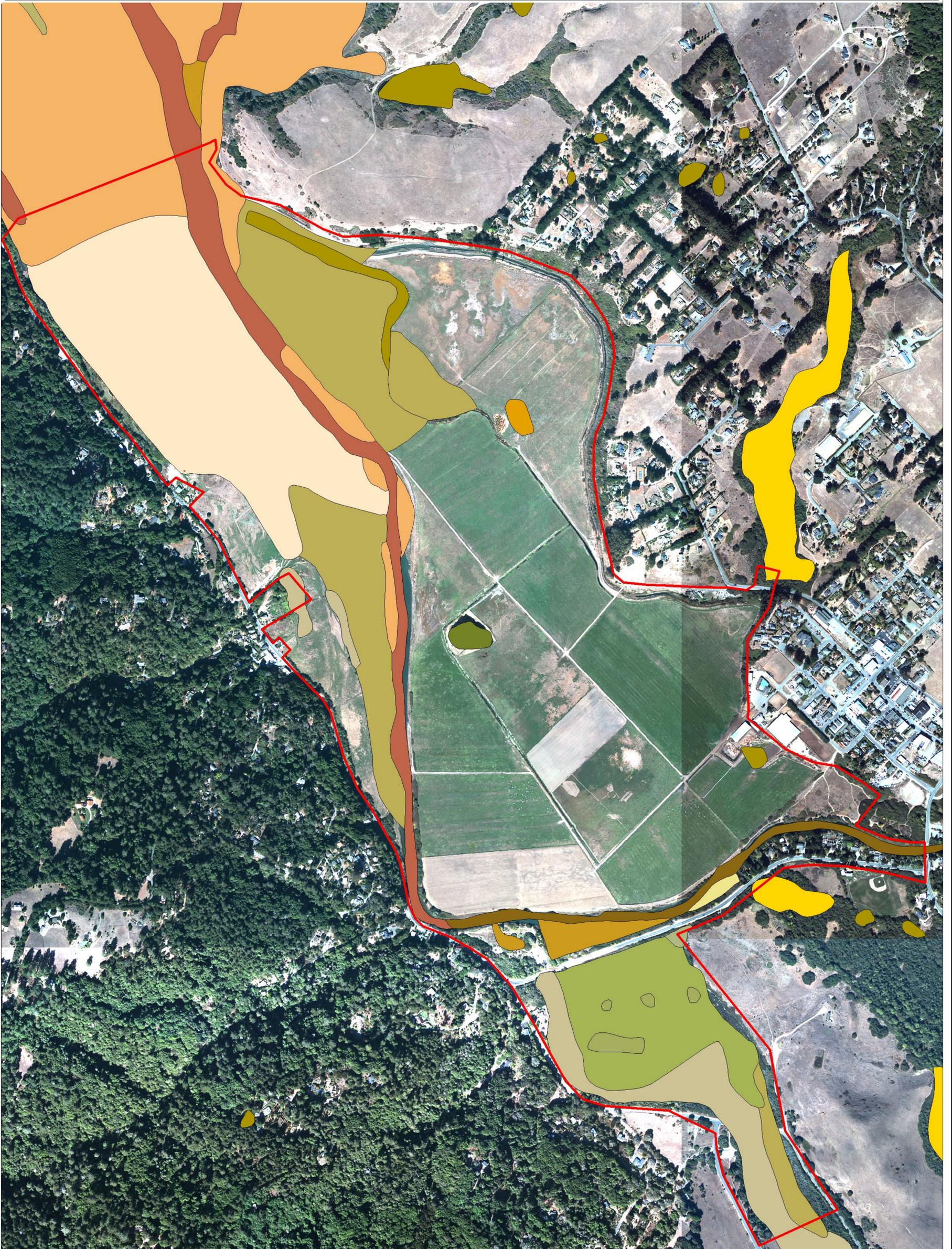
(*Baccharis pilularis*). Approximately 50 percent of the Giacomini Ranch has been mapped as Wet Pasture (Figure 5). Wet Pasture is managed grassland dominated by grasses and herbs that are predominantly facultative or obligate hydrophytes or wetland species. Lower elevation portions of the West Pasture and a smaller portion of the East Pasture also incorporate another vegetation community, Salt Marsh Pasture, that supports the halophytic grass, saltgrass (*Distichlis spicata*) and other halophytic herbs such as alkali heath (*Frankenia salina*), as well as pastoral grasses such as creeping bent grass (*Agrostis stolonifera*) and rough blue grass (*Poa trivialis*; Figure 5). Scrub-shrub and Forested Riparian communities primarily occur along the western boundary of the West Pasture, the southern portion of Lagunitas Creek; Wildlife Conservation Board lands near White House Pool and the Green Bridge; the western and southern edges of Olema Marsh; and along limited portions of Tomasini and Fish Hatchery Creeks and other small drainages (Figure 5). Grazing has eliminated riparian habitat along most of the drainages within the pastures themselves. (The Giacomini typically maintain the active dairy or “milking cows” in the East Pasture and inactive dairy or “dry” herd in the West Pasture.) Outboard of the Lagunitas Creek levee and downstream of the Giacomini Ranch, the predominant vegetation communities are Tidal Salt Marsh, Tidal Brackish Marsh, and, to a lesser extent, Moist Grassland (Figure 5). Olema Marsh supports extensive patches of Freshwater Marsh comprised principally of cattails (*Typha angustifolia*) and tules (*Scirpus californicus* and *acutus*) and was at least once considered the most extensive freshwater marsh in Marin County (Shuford and Timossi 1989; Figure 5).

Previous NWI Delineation Efforts

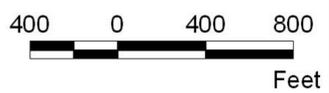
Seventeen (17) NWI wetland types were mapped within the Project Area and vicinity by the USFWS (1991; Figure 6). The NWI map characterized much of the undiked marsh north of the pastures as estuarine emergent, regularly flooded (E2EMN). Lagunitas Creek was characterized as estuarine subtidal unconsolidated bottom subtidal (E1UBL). Fish Hatchery Creek was characterized as palustrine emergent permanently flooded diked and semi-permanently flooded (PEMHh and PEMF). Tomasini Creek was characterized as palustrine emergent seasonal tidal (PEMR) where it enters the Project Area, and as estuarine intertidal stream bed regularly flooded (E2SBN) as it reaches Tomales Bay. The northern half of the West Pasture was characterized as palustrine emergent seasonally flooded (PEMC), and the southern half of the West Pasture was characterized as palustrine emergent temporarily flooded (PEMA). It is unclear whether the entire East Pasture or only the northern half of the East Pasture was classified as palustrine emergent temporarily flooded (PEMA). The north end of the old slough in the East Pasture was characterized as palustrine unconsolidated bottom permanently flooded diked (PUBHh), but none of the drainage ditches in the East Pasture were delineated.

Giacomini Wetland Restoration Project

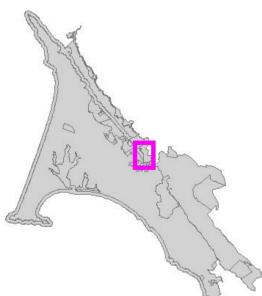
National Wetland Inventory Wetlands



National Wetlands Inventory Cowardin Code		
E1UBL	PABHh	PFOC
E1UBLh	PABHx	PFOR
E2EM/USN	PEMA	PSSA
E2EMN	PEMAh	PSSC
E2EMP	PEMC	PSSR
E2USN	PEMCh	PSSS
E2USP	PEMF	PUBF
L1UBHh	PEMFh	PUBFh
M1UBL	PEMH	PUBH
M2RSN	PEMHh	PUBHh
M2USN	PEMHx	PUBHx
M2USP	PEMR	R1UBV
PABFh	PFOA	R2USC



Map Location



National Park Service
Golden Gate National Recreation Area/
Point Reyes National Seashore
Point Reyes Station, Calif.
County of Marin

Figure 6. Wetlands mapped by the National Wetlands Inventory (1991) in the Giacomini Wetland Restoration Project Delineation Study Area.

SURVEY RESULTS

Cowardin Wetland Classification

This field-based survey yielded vastly different results than the 1991 NWI survey, which relied on high-altitude aerial photography to identify only 17 wetland and aquatic habitat types in the Delineation Study Area. Based on our survey, approximately 90 percent of the Delineation Study Area qualified as wetland. The Seashore's approach resulted in delineation of 800 individual wetland and riparian units or polygons, totaling approximately 673.1 acres in surface area. Among these 800 polygons, more than 225 different classifications of wetlands and aquatic habitat were designated. To simplify presentation of these results, the 225+ formal classifications are consolidated into approximately 96 abbreviated classifications based on System, Subsystem, Class, and Water Regime designations (Figure 7, Table 3).

System/Subsystem

In keeping with its location at a major freshwater-estuarine confluence/boundary, the Delineation Study Area is a combination of Palustrine and Estuarine wetlands and Riparian non-wetlands (Table 2, Figures 7-12). Estuarine Systems are those in which salinities during the period of average annual low flow exceeds 0.5 ppt (Cowardin et al. 1979). Areas mapped as Estuarine included not only undiked, tidal areas such as Lagunitas Creek and the undiked marsh north of Giacomini Ranch and Lagunitas Creek, but even some areas inside dikes such as the Giacomini Ranch West and East Pastures, Tomasini and Fish Hatchery Creeks, and Olema Marsh (Figures 7-12). Acreage of Estuarine Systems within the Delineation Study Area totaled 332.94 acres, with almost all of that area occurring in the Giacomini Ranch and adjacent areas (332.89 acres; Table 2). Estuarine influence in these areas results either from tidal surface flow muted to some degree either naturally or by improperly functioning tidegates (Olema Marsh; Fish Hatchery Creek/northern portion of Giacomini Ranch West Pasture; Tomasini Creek) or from indirect tidal interaction with the groundwater table (See Study Area Background section). In some instances, particularly in diked areas directly adjacent to Lagunitas Creek with alluvial soils, there may be some direct interaction of the groundwater table with Lagunitas Creek. However, most likely, tides in Lagunitas Creek exert enough hydraulic pressure on the underlying freshwater-derived groundwater table in the diked pastures to create tidal fluctuations (KHE, *in prep.*). The elevated salinities observed in the diked pastures' groundwater tables probably derive from residual marine salts deposited in underlying estuarine sediments when these areas were open to tidal flushing (KHE, *in prep.*). Most of the mapped Estuarine areas consisted of the Intertidal Subsystem (2), but the Subtidal Subsystem (1) did occur in Lagunitas Creek, the northern portions of Fish Hatchery and Tomasini Creeks, and some diked portions of old sloughs in the Giacomini Ranch.

Because of the extensive tidal influence at the northern end of the Delineation Study Area, Palustrine Systems dominate primarily the southern end, particularly Olema Marsh,

Table 2. Acreages of Cowardin Systems and Classes in the Giacomini Wetland Restoration Project Delineation Study Area.				
<i>Wetland Code</i>	<i>Classification</i>	<i>Giacomini Ranch & SLC and County Park Lands (Acres)</i>	<i>Olema Marsh and Bear Valley Creek (Acres)</i>	<i>Delineation Study Area Total (Acres)</i>
SYSTEM				
E	Estuarine	332.89	0.05	332.94
P	Palustrine	300.87	65.72	366.59
Rp	Riparian	37.92	17.21	55.13
CLASS				
UB	Unconsolidated Bottom	52.49	5.60	58.09
AB	Aquatic Bed	9.86	4.03	13.89
EM	Emergent	523.61	36.07	559.68
SS	Scrub Shrub	30.62	5.25	35.87
FO	Forested	54.51	32.04	86.55

Bear Valley Creek, and the southern end of the Giacomini pastures (Figures 7-12). In the northern end of the Delineation Study Area, Palustrine areas are relegated to the fringes of the Giacomini Ranch on higher gradient sections of creeks such as Tomasini and Fish Hatchery and small drainages and higher elevation areas adjacent to seeps flowing off the Inverness Ridge or Point Reyes Mesa (Figures 7-12). Acreage of Palustrine Systems within the Delineation Study Area totaled 366.6 acres, with 300.9 of those acres occurring in the Giacomini Ranch (Table 2). Often, a sharp juxtaposition exists between Palustrine and Estuarine wetlands, as evidenced by the rather floristically unique, seep- and drainage-fed “Freshwater Marsh” or Palustrine Emergent marsh polygon (e.g., PEM1Eb) adjacent to Sir Francis Drake Boulevard that is bordered by an Estuarine Emergent (E2EM1R) Diked Tidal Salt Marsh polygon that has groundwater salinities reaching as high as 50 ppt. There are no Palustrine Subsystems.

Some polygons on the upland perimeter of the Delineation Study Area were mapped as the NWI’s new Riparian (Rp) System category (Figures 7-12). Riparian (Rp) Systems support Scrub Shrub or Forested Class hydrophytic vegetation, but lack wetland hydrology. Acreage of Riparian Systems within the Delineation Study Area totaled 55.1 acres, with 37.9 of those acres occurring in the Giacomini Ranch (Table 2). Most of the polygons within the Delineation Study Area that qualified as Riparian (Rp) are Intermittently (J) or Temporarily Flooded (A) in which flooding occurs only at peak storm flow discharge or for several days following peak discharge or flooding occurs only an episodic basis (i.e., recurrence interval > 2 years). These Riparian Systems are dominated by deeply rooted riparian tree and shrub species -- many of which are considered hydrophytic at least in their seedling and juvenile stages -- that typically rely on groundwater tables that are greater than 12 inches from the soil surface. All of the Riparian System areas were mapped as Lotic (1) or flowing water Subsystems, because they occurred at the periphery of freshwater streams, creeks, drainages, or actively flowing seeps.

Class/Subclass

Most of the Delineation Study Area is dominated by low-growing Emergent (EM), Persistent (1) plant species such as pastoral, salt marsh, and ruderal forbs and herbs. Acreage of Emergent Class within the Delineation Study Area totaled 559.7 acres, 523.6 acres of which occur in the Giacomini Ranch and adjacent areas (Table 2). The Emergent Class was the dominant class in the Giacomini Ranch, undiked marsh north of Giacomini Ranch, and Olema Marsh (32.2 acres; Table 2; Figures 7-12). Some of the palustrine portions of creeks such as Fish Hatchery or marshes such as the Giacomini Freshwater Marsh and Olema Marsh supported Aquatic Bed species such as hydrocotyle (*Hydrocotyle ranunculoides*) that either tended to persist year round or to die back as water levels dropped during the late summer and fall. Acreage of Aquatic Bed Class was relatively low, totaling 13.9 acres (Table 2). Emergent and Aquatic Bed plant cover decreases significantly in portions of creeks, drainages, and drainage ditches where the stream gradient or velocity is moderate to high or dredging has been performed historically to remove vegetation. Unconsolidated Bottom occurred in unvegetated portions of creeks, ditches, and marshes. Acreage of Unconsolidated Bottom Class totaled 58.1 acres, with most of that acreage coming from the Giacomini Ranch and the portion of Lagunitas Creek within the Delineation Study Area (52.5 acres; Table 2; Figures 7-12).

Areas with taller vegetation (Scrub Shrub or Forested) tended to occur outside the Giacomini Ranch or on its perimeter due the lack of grazing and/or higher quantities of freshwater from seeps and drainages/creeks. Acreage of Scrub Shrub Class in the Delineation Study Area totaled 35.9 acres, with 30.6 of those acres occurring on the perimeter of the Giacomini Ranch or adjacent areas (Table 2; Figures 7-12). As with Aquatic Bed, the areal extent of the Scrub Shrub class was relatively low within all regions of the Delineation Study Area. Acreage of the Forested Class totaled 86.6 acres, with 54.5 acres occurring on the perimeter of the Giacomini Ranch and adjacent areas (Table 2; Figures 7-12). The Forested Class was the dominant class in the portion of Bear Valley Creek (20.6 acres) within the Delineation Study Area and the second highest class in the Giacomini Ranch (54.5) and Olema Marsh (11.4 acres) areas (Table 2; Figures 7-12).

Many Scrub Shrub and Forested areas supported extensive stands of cold winter deciduous, broad-leaved riparian species such as arroyo willow (*Salix lasiolepis*; FACW) and red alder (*Alnus rubra*; FACW): in these areas, Scrub-Shrub areas typically represented immature stands of arroyo willow and red alder. However, Scrub-Shrub also included areas dominated by larger shrubs, many of which are associated with riparian habitat such as broad-leaved evergreen species such as California blackberry (*Rubus ursinus*). Many Scrub-Shrub and Forested polygons represented a mixture of broadleaf evergreen species such as California blackberry or Himalayan blackberry (*Rubus discolor*) and broadleaf winter deciduous species such as arroyo willow and red alder: the Seashore used a new code (10) to characterize these mixed polygons. Occasionally, the Delineation Study Area included Forested patches dominated by species only loosely associated with riparian habitat such as the broad-leaved evergreen species coast live oak

(*Quercus agrifolia*) and California bay (*Umbellularia californica*). These species can actually dominate riparian zones in selected habitats such as arid areas (coast live oak) or higher elevation, steep gradient ravines (California bay) where species such as willow and alder are less likely to establish.

Emergent plant cover within the Delineation Study Area overwhelmingly consisted of Persistent (1) plant species. For the purposes of this project, Persistent was defined as species that do not die back or that die back to some degree, but leave some canopy architecture remaining that can be used for wetland functions such as water quality improvement, flood flow energy dissipation, or wildlife habitat (e.g., cattails or *Typha* spp., OBL). Conversely, Non-Persistent (2) species are those that completely die back every year, leaving no trace of their presence by fall or sometimes even by summer. Flora characteristic of vernal pools would be considered Non-Persistent by this definition. The Persistent Emergent Subclass incorporated a wide range of species and canopy architecture types, including short emergents in expansive pasturelands, undiked marsh, freshwater marsh, and grasslands and tall emergents in freshwater marsh. The Non-Persistent Emergent Subclass showed no clear dominance pattern. Aquatic Bed subclasses within the Delineation Study Area consisted of Rooted Vascular (3) and Floating Vascular (4) communities. Almost exclusively, the Rooted Vascular Aquatic Bed subclasses consisted of hydrocotyle (*Hydrocotyle ranunculoides*, OBL). The Floating subclass included both duckweed (*Lemna minor and miniscula*, OBL) and *Azolla filiculoides* (OBL).

Unconsolidated Bottom subclasses within the Delineation Study Area consisted largely of Cobble-Gravel (1), Sand (2), Mud (3), and Organic (4). Mineral soils (Subclasses 1-3) dominated most of the Delineation Study Area, but a combination of Organic and Mud sediments occurred in some of the unvegetated portions of Olema Marsh.

Water Regime

The complex hydrology within the Delineation Study Area (see Study Area Background section) has created an equally complex layer of Water Regimes. The juxtaposition between marine tides and perennial and seasonal surface water and groundwater/seep flows in this transitional part of the estuary has resulted in a mosaic of polygons with diverse salinity and temporal inundation/saturation regimes.

In keeping with the larger System/Subsystem classification, most of the Tidal Water Regimes are in the northern portion of the Delineation Study Area (Figures 7-12). The Tidal Water Regimes occurred mostly in undiked areas and those with malfunctioning tidegates and culverts and included Subtidal (L), Irregularly Exposed (M), Regularly Flooded (N), and Irregularly Flooded (P), which the Seashore divided into Pm (Irregularly Flooded between MHW – MHHW) and Ph (Irregularly Flooded above MHHW). Based on hydraulic modeling results, the northern portion of Lagunitas Creek within the Delineation Study Area is Irregularly Exposed (M), while the southern portion is Subtidal (L) due to the presence of a substantial gravel bar north of White House Pool that creates a long section of “glide” or a section of slow to moderate velocity water

without riffles or rapids almost all the way to the Green Bridge. Within this “glide” are a number of gravel “point” bars designated as Irregularly Exposed (M), although these were not separated out as part of the mapping effort. Regularly Flooded (N) and Irregularly Flooded (Pm and Ph) correspond to low marsh, mid, and high intertidal emergent marsh, respectively.

For this project, Freshwater-Tidal Water Regime modifiers were assigned to portions of the Delineation Study Area that appeared to be indirectly, rather than directly, influenced by tidal action. Most of this indirect tidal influence resulted from an apparent interaction of tidal action in Lagunitas Creek and potentially Tomasini Creek on the shallow groundwater tables underlying the Giacomini Ranch pastures. By far, the dominant Freshwater-Tidal Water Regime modifier occurring in the Delineation Study Area was Saturated-Tidal (Q), which totaled 179.7 acres and encompassed most of the northern portion of both the East and West Giacomini Ranch pastures (Figures 7-12). These areas typically appear to have very little in the way of surface run-off or flow, but rather become saturated through shallow groundwater tables or leaching of precipitation. By comparison, the second highest Freshwater-Tidal modifier in terms of total acreage was Seasonally Flooded-Tidal (R) with 23.9 acres. Seasonally Flooded areas often have prolonged surface ponding throughout the winter and spring seasons.

Non-Tidal constituted perhaps the most complex set of water regimes in the Delineation Study Area, fostered again by the complex interaction between surface flows from creeks and drainages and groundwater or seep flow from the Point Reyes Mesa and Inverness Ridge. Most of the Non-Tidal wetlands were Saturated-Seasonally (B; 92 acres; Table 3). The Non-Tidal modifier with the second highest acreage was Saturated-Seasonally/Upland, which represented polygons with hydrophytic vegetation that were a combination of wetland and upland (B/U; 24 acres; Table 3). The “wetland” water regime modifier with the third highest acreage (23.4 acres) actually represented more upland conditions, specifically areas that are only Intermittently Flooded (J) and/or Upland (U). Most of the other dominant Non-Tidal Water Regimes involved some combination of saturated and non-wetland hydrology (e.g., temporary or seasonal flooding and seasonal or permanent saturation, specifically Seasonally Flooded – Seasonally Saturated (Eb; 13.9 acres), Temporarily Flooded–Seasonally Saturated (Ab; 11.5 acres), and Temporarily Flooded–Seasonally Saturated or Seasonally Saturated (Ab/B; 10.4 acres; Table 3). Higher elevation riparian areas that are Intermittently Flooded (J) during larger storm flows or peak streamflow discharge, but largely rely on deeper groundwater tables (X) also accounted for a significant amount of acreage (J/X; ~13 acres; Table 3).

Modified Cowardin/CDFG Wetlands (CCC)

Wetlands potentially subject to oversight by the CCC under the Coastal Act were delineated using the modified Cowardin wetland delineation approach developed by CDFG. This methodology relies on the presence of only one of three criteria – hydrophytic vegetation, wetland hydrology, and hydric soils – to classify areas as wetlands. Because hydrophytic vegetation is prevalent within the Seashore and coastal

Marin County, this wetland delineation was conducted as part of the vegetation mapping and Cowardin wetland classification effort that create and classified polygons with similar vegetation communities or plant associations larger than 10m². For this reason, areas that supported hydrophytic vegetation, but did not necessarily appear to have wetland hydrology, are incorporated into the CCC wetlands map, but are absent from the map of wetlands potentially subject to jurisdiction by the Corps (Parsons 2005) or management and oversight by the Park Service. These drier “wetland” areas are largely represented by the Riparian System code in Figures 7-12. Based on our survey, approximately 673.1 acres of wetlands potentially subject to oversight by the CCC exist in the Delineation Study Area. The Giacomini Ranch, adjacent undiked marsh, and County of Marin park areas near White House Pool and the Green Bridge account for 593.4 acres, with Olema Marsh and the downstream portion of Bear Valley Creek (79.7 acres) comprise the remainder.

Cowardin Wetlands (Park Service)

Park Service lands within the Delineation Study Area generally include the Giacomini Ranch and portions of Bear Valley Creek upstream of Bear Valley Road and the southern 14.0 acres of Olema Marsh. Wetlands potentially subject to management and oversight by the Park Service were delineated using the Cowardin wetland delineation definition developed by the FWS. This definition relies on the presence of two of three criteria – wetland hydrology **AND** hydrophytic vegetation **OR** hydric soils – to classify areas as wetlands. Because of the similarity of this approach to that of the Corps, we had proposed to delineate these wetlands by modifying, if necessary, the boundary line proposed for potential Corps’ jurisdiction to incorporate areas that met two, but not necessarily all three, criteria. After reviewing the Corps’ datasheets (Appendix D), however, there did not appear to be any areas that would require expansion of the Corps’ potential jurisdictional boundary. There were some areas that technically only met two of the criteria, but most of these areas qualified as Corps’ wetlands, as well, because wetland hydrology and hydrophytic vegetation were present, and the absence of hydric soil indicators could be explained by the fact that soils were fill, recently disturbed, or alluvial and therefore less likely to display obvious hydric soil indicators. Therefore, wetlands potentially subject to management and oversight by the Park Service in the Delineation Study Area total 446.4 acres.



Golden Gate National Recreation Area

Giacomini Wetland Restoration Project

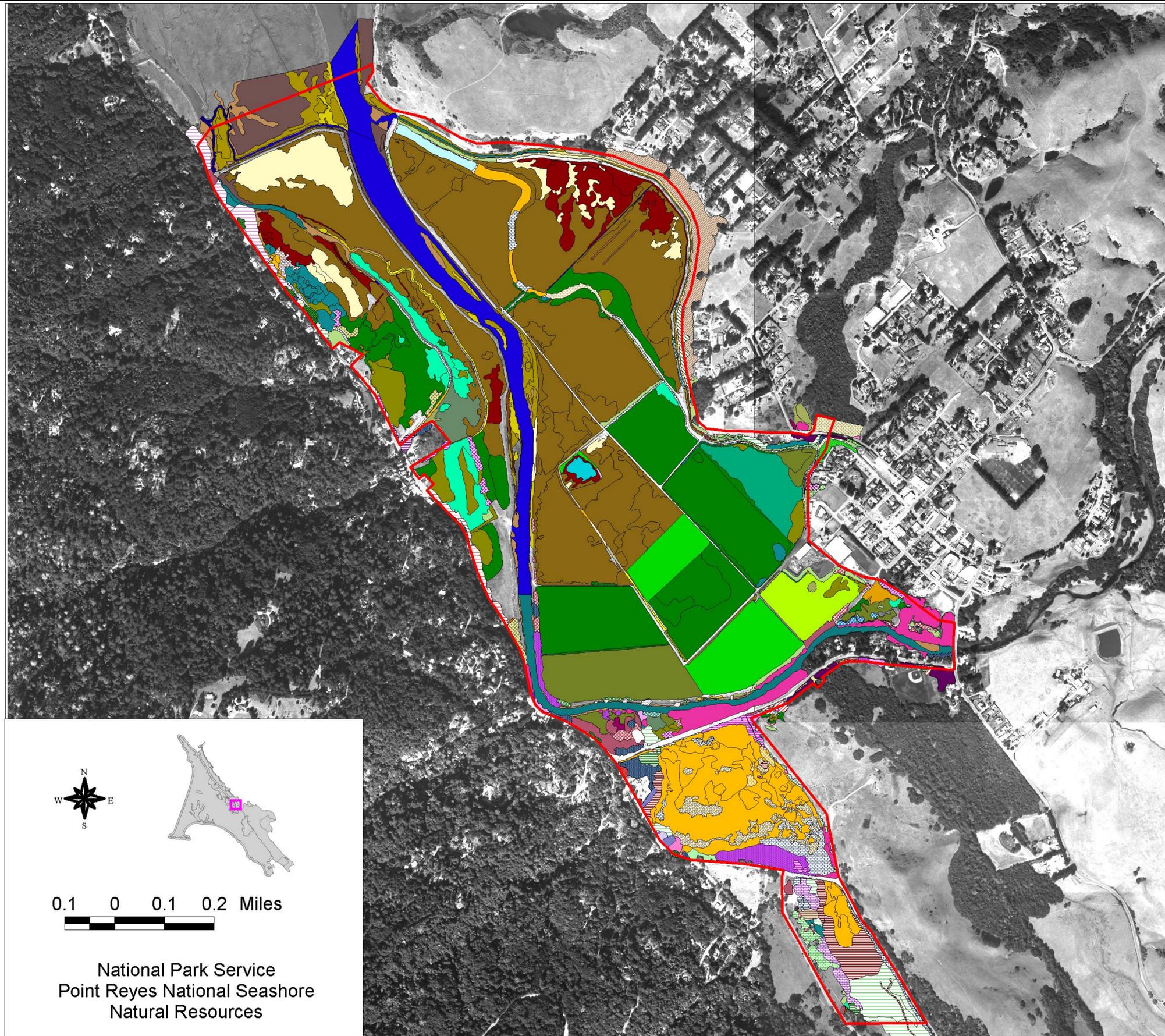


Figure 7. Wetlands delineated according to a modified Cowardin methodology. View of entire Project Area.

Delineation Study Area Boundary			
1	E1UB1M	49	PFO1Ab
2	E1UB3L	50	PFO1Ab/Eb
3	E1UB3M	51	PFO1Eb
4	E1UB3R	52	PFO1B
5	E1UB3V	53	PFO1Ei
6	E2AB3N	54	PFO1Ei/X
7	E2AB4V	55	PFO1H
8	E2EM1L	56	PFO1H/A
9	E2EM1M	57	PFO1I
10	E2EM1N	58	PFO3B/X
11	E2EM1N/Pm	59	PFO3F/A
12	E2EM1Ph	60	PFO3Eb
13	E2EM1Pm	61	PSS10A
14	E2EM1Q	62	PSS10Ai
15	E2EM1R	63	PSS10Eb
16	E2EM1S	64	PSS10I
17	E2EM1T	65	PSS1Ab
18	E2EM1U	66	PSS1B
19	E2EM1V	67	PSS1Eb
20	E2EM2S	68	PSS1Ei
21	E2FO1L	69	PSS1H
22	E2FO1Pm	70	PSS3Ab
23	E2SS1L	71	PSS3I
24	E2SS1Ph/X	72	PSS3Ei
25	E2SS1Pm	73	PUB1H
26	PAB3Ei	74	PUB3/4H
27	PAB3H	75	PUB3T
28	PAB4H	76	Rp1FO10X
29	PEM1/2Eb	77	Rp1FO1A
30	PEM1A	78	Rp1FO1J
31	PEM1Ab	79	Rp1FO1J/X
32	PEM1Ab/B	80	Rp1FO1X
33	PEM1Ab/U	81	Rp1FO3J
34	PEM1B	82	Rp1FO3U
35	PEM1B/U	83	Rp1FO3X
36	PEM1Eb	84	Rp1SS10J/X
37	PEM1Eb/U	85	Rp1SS10U
38	PEM1Ei	86	Rp1SS10X
39	PEM1H	87	Rp1SS1J
40	PEM1I	88	Rp1SS1J/X
41	PEM1J	89	Rp1SS1U
42	PEM1J/U	90	Rp1SS1X
43	PEM1U	91	Rp1SS3J
44	PEM2A	92	Rp1SS3J/U
45	PEM2Ab	93	Rp1SS3J/X
46	PFO10B	94	Rp1SS3U
47	PFO10Eb	95	Rp1SS3U/X
48	PFO10I	96	Rp1SS3X



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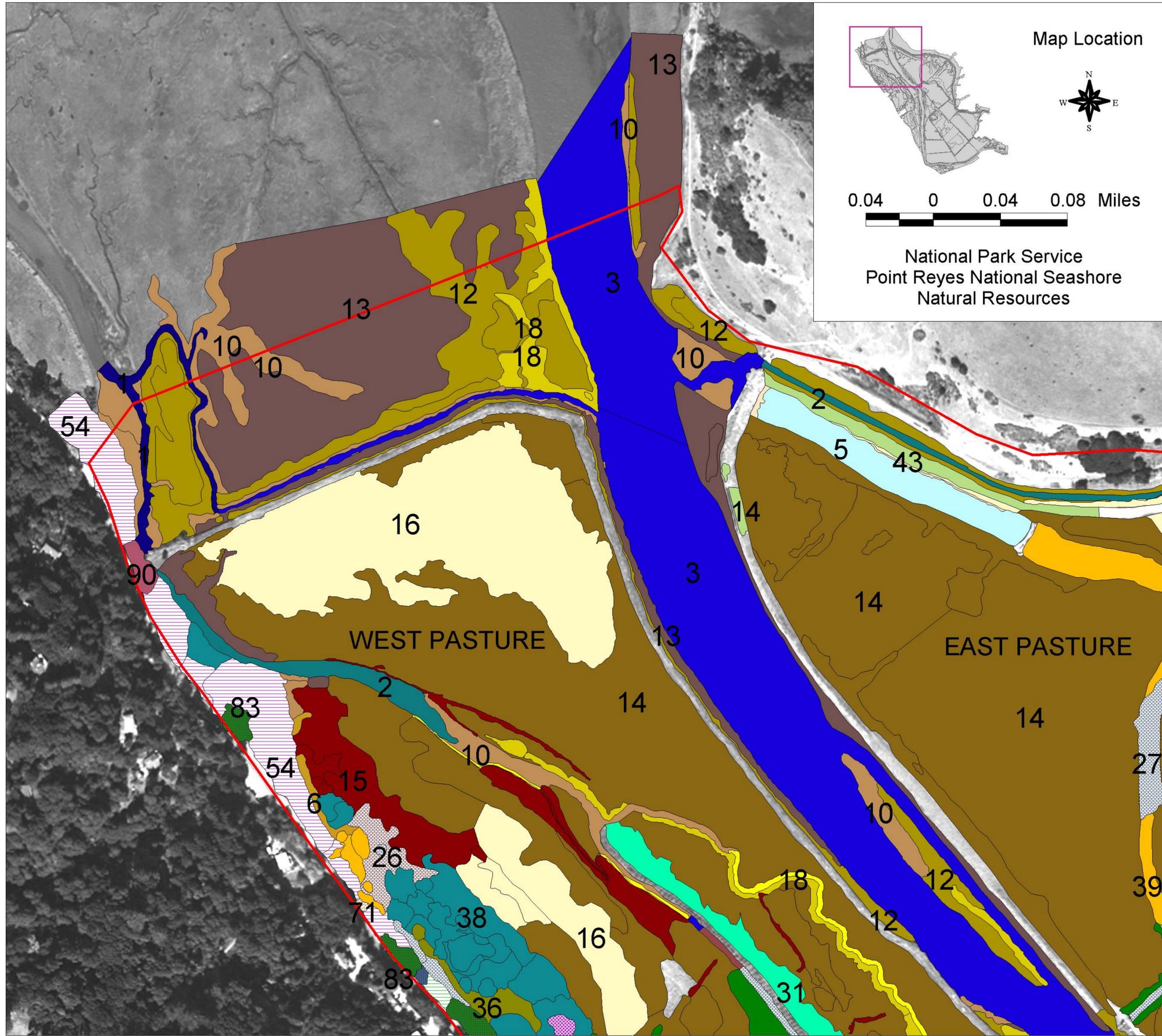


Figure 8. Detail of Cowardin wetlands in northern Project Area and vicinity.

Delineation Study Area Boundary			
1	E1UB1M	49	PFO1Ab
2	E1UB3L	50	PFO1Ab/Eb
3	E1UB3M	51	PFO1Eb
4	E1UB3R	52	PFO1B
5	E1UB3V	53	PFO1Ei
6	E2AB3N	54	PFO1Ei/X
7	E2AB4V	55	PFO1H
8	E2EM1L	56	PFO1H/A
9	E2EM1M	57	PFO1I
10	E2EM1N	58	PFO3B/X
11	E2EM1N/Pm	59	PFO3F/A
12	E2EM1Ph	60	PFO3Eb
13	E2EM1Pm	61	PSS10A
14	E2EM1Q	62	PSS10Ai
15	E2EM1R	63	PSS10Eb
16	E2EM1S	64	PSS10I
17	E2EM1T	65	PSS1Ab
18	E2EM1U	66	PSS1B
19	E2EM1V	67	PSS1Eb
20	E2EM2S	68	PSS1Ei
21	E2FO1L	69	PSS1H
22	E2FO1Pm	70	PSS3Ab
23	E2SS1L	71	PSS3I
24	E2SS1Ph/X	72	PSS3Ei
25	E2SS1Pm	73	PUB1H
26	PAB3Ei	74	PUB3/4H
27	PAB3H	75	PUB3T
28	PAB4H	76	Rp1FO10X
29	PEM1/2Eb	77	Rp1FO1A
30	PEM1A	78	Rp1FO1J
31	PEM1Ab	79	Rp1FO1J/X
32	PEM1Ab/B	80	Rp1FO1X
33	PEM1Ab/U	81	Rp1FO3J
34	PEM1B	82	Rp1FO3U
35	PEM1B/U	83	Rp1FO3X
36	PEM1Eb	84	Rp1SS10J/X
37	PEM1Eb/U	85	Rp1SS10U
38	PEM1Ei	86	Rp1SS10X
39	PEM1H	87	Rp1SS1J
40	PEM1I	88	Rp1SS1J/X
41	PEM1J	89	Rp1SS1U
42	PEM1J/U	90	Rp1SS1X
43	PEM1U	91	Rp1SS3J
44	PEM2A	92	Rp1SS3J/U
45	PEM2Ab	93	Rp1SS3J/X
46	PFO10B	94	Rp1SS3U
47	PFO10Eb	95	Rp1SS3U/X
48	PFO10I	96	Rp1SS3X



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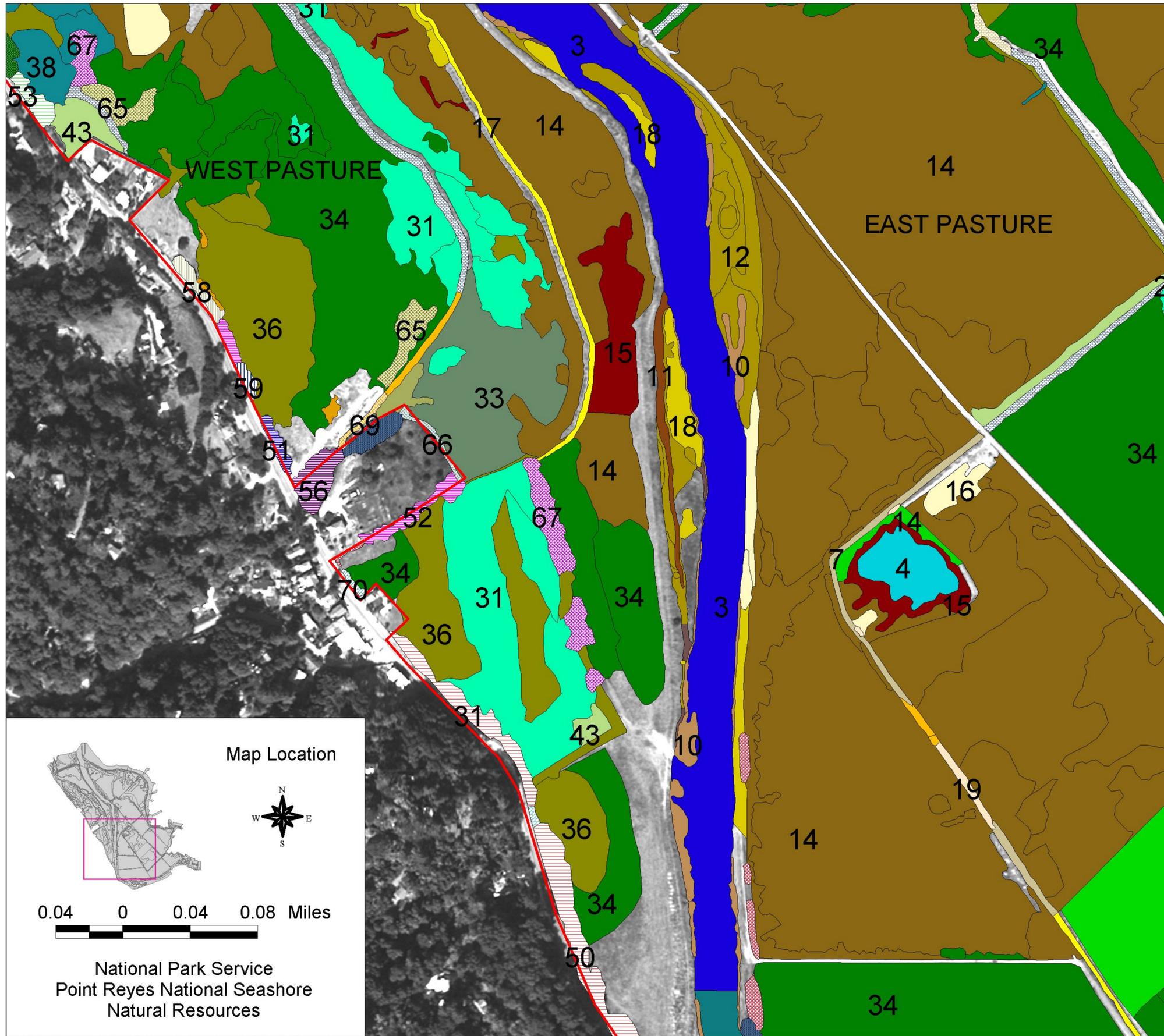


Figure 9. Detail of Cowardin wetlands in southwestern Project Area and vicinity.

Delineation Study Area Boundary			
1	E1UB1M	49	PFO1Ab
2	E1UB3L	50	PFO1Ab/Eb
3	E1UB3M	51	PFO1Eb
4	E1UB3R	52	PFO1B
5	E1UB3V	53	PFO1Ei
6	E2AB3N	54	PFO1Ei/X
7	E2AB4V	55	PFO1H
8	E2EM1L	56	PFO1H/A
9	E2EM1M	57	PFO1I
10	E2EM1N	58	PFO3B/X
11	E2EM1N/Pm	59	PFO3F/A
12	E2EM1Ph	60	PFO3Eb
13	E2EM1Pm	61	PSS10A
14	E2EM1Q	62	PSS10Ai
15	E2EM1R	63	PSS10Eb
16	E2EM1S	64	PSS10I
17	E2EM1T	65	PSS1Ab
18	E2EM1U	66	PSS1B
19	E2EM1V	67	PSS1Eb
20	E2EM2S	68	PSS1Ei
21	E2FO1L	69	PSS1H
22	E2FO1Pm	70	PSS3Ab
23	E2SS1L	71	PSS3I
24	E2SS1Ph/X	72	PSS3Ei
25	E2SS1Pm	73	PUB1H
26	PAB3Ei	74	PUB3/4H
27	PAB3H	75	PUB3T
28	PAB4H	76	Rp1FO10X
29	PEM1/2Eb	77	Rp1FO1A
30	PEM1A	78	Rp1FO1J
31	PEM1Ab	79	Rp1FO1J/X
32	PEM1Ab/B	80	Rp1FO1X
33	PEM1Ab/U	81	Rp1FO3J
34	PEM1B	82	Rp1FO3U
35	PEM1B/U	83	Rp1FO3X
36	PEM1Eb	84	Rp1SS10J/X
37	PEM1Eb/U	85	Rp1SS10U
38	PEM1Ei	86	Rp1SS10X
39	PEM1H	87	Rp1SS1J
40	PEM1I	88	Rp1SS1J/X
41	PEM1J	89	Rp1SS1U
42	PEM1J/U	90	Rp1SS1X
43	PEM1U	91	Rp1SS3J
44	PEM2A	92	Rp1SS3J/U
45	PEM2Ab	93	Rp1SS3J/X
46	PFO10B	94	Rp1SS3U
47	PFO10Eb	95	Rp1SS3U/X
48	PFO10I	96	Rp1SS3X



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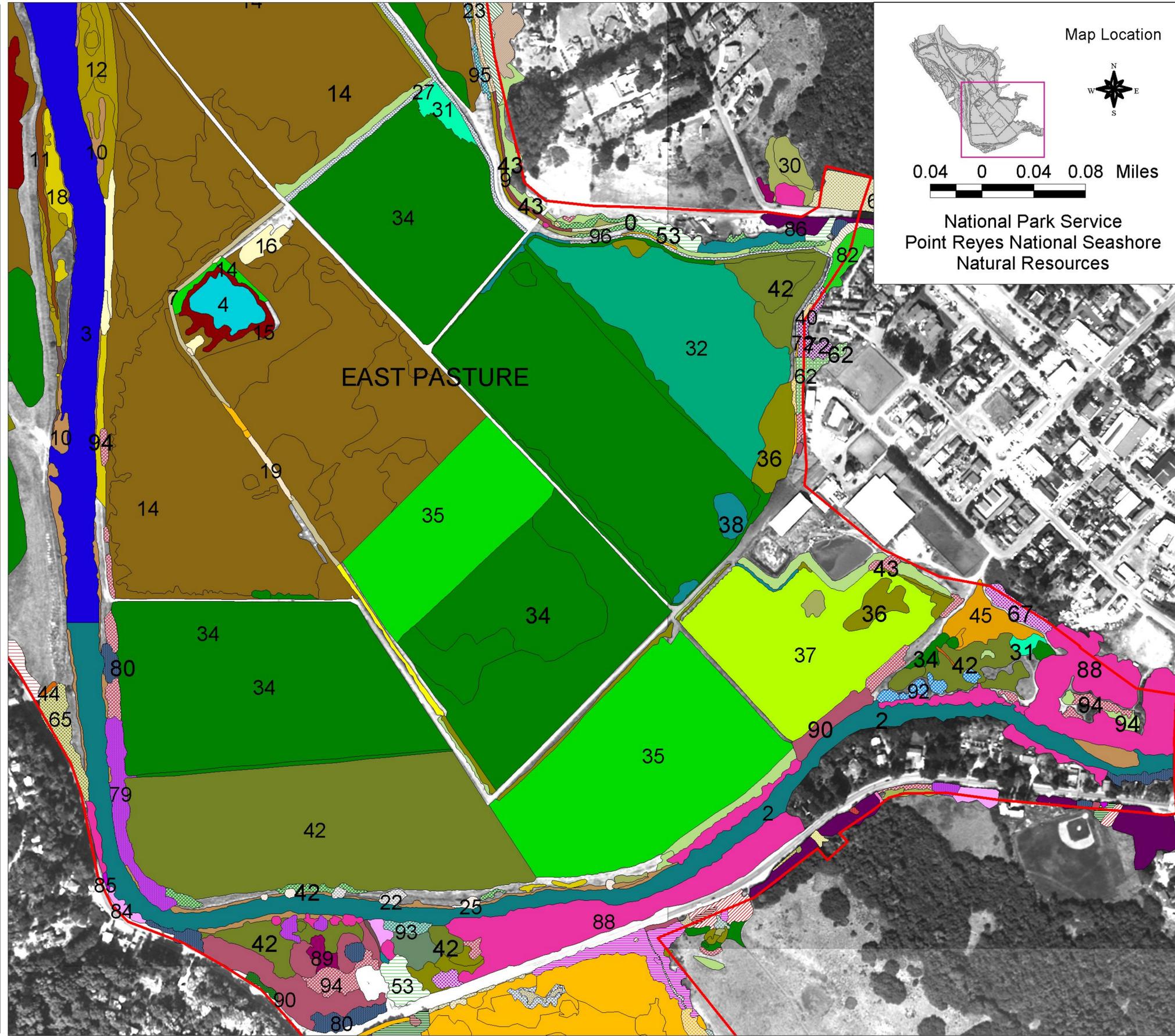


Figure 10. Detail of Cowardin wetlands in southern Project Area and vicinity.

Delineation Study Area Boundary			
1	E1UB1M	49	PFO1Ab
2	E1UB3L	50	PFO1Ab/Eb
3	E1UB3M	51	PFO1Eb
4	E1UB3R	52	PFO1B
5	E1UB3V	53	PFO1Ei
6	E2AB3N	54	PFO1Ei/X
7	E2AB4V	55	PFO1H
8	E2EM1L	56	PFO1H/A
9	E2EM1M	57	PFO1I
10	E2EM1N	58	PFO3B/X
11	E2EM1N/Pm	59	PFO3F/A
12	E2EM1Ph	60	PFO3Eb
13	E2EM1Pm	61	PSS10A
14	E2EM1Q	62	PSS10Ai
15	E2EM1R	63	PSS10Eb
16	E2EM1S	64	PSS10I
17	E2EM1T	65	PSS1Ab
18	E2EM1U	66	PSS1B
19	E2EM1V	67	PSS1Eb
20	E2EM2S	68	PSS1Ei
21	E2FO1L	69	PSS1H
22	E2FO1Pm	70	PSS3Ab
23	E2SS1L	71	PSS3I
24	E2SS1Ph/X	72	PSS3Ei
25	E2SS1Pm	73	PUB1H
26	PAB3Ei	74	PUB3/4H
27	PAB3H	75	PUB3T
28	PAB4H	76	Rp1FO10X
29	PEM1/2Eb	77	Rp1FO1A
30	PEM1A	78	Rp1FO1J
31	PEM1Ab	79	Rp1FO1J/X
32	PEM1Ab/B	80	Rp1FO1X
33	PEM1Ab/U	81	Rp1FO3J
34	PEM1B	82	Rp1FO3U
35	PEM1B/U	83	Rp1FO3X
36	PEM1Eb	84	Rp1SS10J/X
37	PEM1Eb/U	85	Rp1SS10U
38	PEM1Ei	86	Rp1SS10X
39	PEM1H	87	Rp1SS1J
40	PEM1I	88	Rp1SS1J/X
41	PEM1J	89	Rp1SS1U
42	PEM1J/U	90	Rp1SS1X
43	PEM1U	91	Rp1SS3J
44	PEM2A	92	Rp1SS3J/U
45	PEM2Ab	93	Rp1SS3J/X
46	PFO10B	94	Rp1SS3U
47	PFO10Eb	95	Rp1SS3U/X
48	PFO10I	96	Rp1SS3X



Golden Gate National Recreation Area

Giacomini Wetland Restoration Project



Map Location

0.04 0 0.04 0.08 Miles

National Park Service
Point Reyes National Seashore
Natural Resources

Figure 11. Detail of Cowardin wetlands in eastern Project Area and vicinity.

Delineation Study Area Boundary			
1	E1UB1M	49	PFO1Ab
2	E1UB3L	50	PFO1Ab/Eb
3	E1UB3M	51	PFO1Eb
4	E1UB3R	52	PFO1B
5	E1UB3V	53	PFO1Ei
6	E2AB3N	54	PFO1Ei/X
7	E2AB4V	55	PFO1H
8	E2EM1L	56	PFO1H/A
9	E2EM1M	57	PFO1I
10	E2EM1N	58	PFO3B/X
11	E2EM1N/Pm	59	PFO3F/A
12	E2EM1Ph	60	PFO3Eb
13	E2EM1Pm	61	PSS10A
14	E2EM1Q	62	PSS10Ai
15	E2EM1R	63	PSS10Eb
16	E2EM1S	64	PSS10I
17	E2EM1T	65	PSS1Ab
18	E2EM1U	66	PSS1B
19	E2EM1V	67	PSS1Eb
20	E2EM2S	68	PSS1Ei
21	E2FO1L	69	PSS1H
22	E2FO1Pm	70	PSS3Ab
23	E2SS1L	71	PSS3I
24	E2SS1Ph/X	72	PSS3Ei
25	E2SS1Pm	73	PUB1H
26	PAB3Ei	74	PUB3/4H
27	PAB3H	75	PUB3T
28	PAB4H	76	Rp1FO10X
29	PEM1/2Eb	77	Rp1FO1A
30	PEM1A	78	Rp1FO1J
31	PEM1Ab	79	Rp1FO1J/X
32	PEM1Ab/B	80	Rp1FO1X
33	PEM1Ab/U	81	Rp1FO3J
34	PEM1B	82	Rp1FO3U
35	PEM1B/U	83	Rp1FO3X
36	PEM1Eb	84	Rp1SS10J/X
37	PEM1Eb/U	85	Rp1SS10U
38	PEM1Ei	86	Rp1SS10X
39	PEM1H	87	Rp1SS1J
40	PEM1I	88	Rp1SS1J/X
41	PEM1J	89	Rp1SS1U
42	PEM1J/U	90	Rp1SS1X
43	PEM1U	91	Rp1SS3J
44	PEM2A	92	Rp1SS3J/U
45	PEM2Ab	93	Rp1SS3J/X
46	PFO10B	94	Rp1SS3U
47	PFO10Eb	95	Rp1SS3U/X
48	PFO10I	96	Rp1SS3X



Golden Gate National Recreation Area

Giacomini Wetland Restoration Project

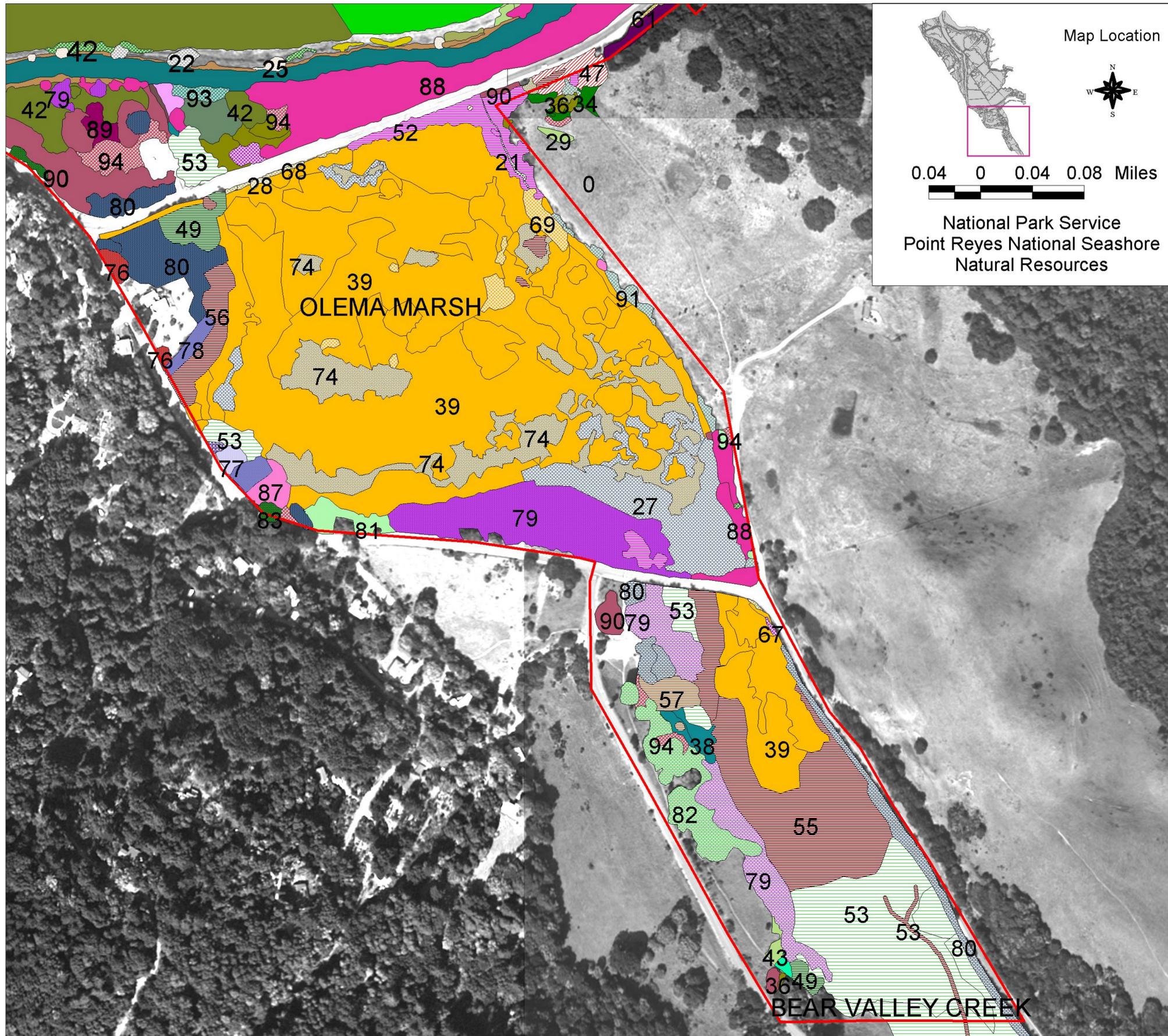


Figure 12. Detail of Cowardin wetlands in Olema Marsh, White House Pool, and northern portion of Bear Valley Creek.

Delineation Study Area Boundary			
1	E1UB1M	49	PFO1Ab
2	E1UB3L	50	PFO1Ab/Eb
3	E1UB3M	51	PFO1Eb
4	E1UB3R	52	PFO1B
5	E1UB3V	53	PFO1Ei
6	E2AB3N	54	PFO1Ei/X
7	E2AB4V	55	PFO1H
8	E2EM1L	56	PFO1H/A
9	E2EM1M	57	PFO1I
10	E2EM1N	58	PFO3B/X
11	E2EM1N/Pm	59	PFO3F/A
12	E2EM1Ph	60	PFO3Eb
13	E2EM1Pm	61	PSS10A
14	E2EM1Q	62	PSS10Ai
15	E2EM1R	63	PSS10Eb
16	E2EM1S	64	PSS10I
17	E2EM1T	65	PSS1Ab
18	E2EM1U	66	PSS1B
19	E2EM1V	67	PSS1Eb
20	E2EM2S	68	PSS1Ei
21	E2FO1L	69	PSS1H
22	E2FO1Pm	70	PSS3Ab
23	E2SS1L	71	PSS3I
24	E2SS1Ph/X	72	PSS3Ei
25	E2SS1Pm	73	PUB1H
26	PAB3Ei	74	PUB3/4H
27	PAB3H	75	PUB3T
28	PAB4H	76	Rp1FO10X
29	PEM1/2Eb	77	Rp1FO1A
30	PEM1A	78	Rp1FO1J
31	PEM1Ab	79	Rp1FO1J/X
32	PEM1Ab/B	80	Rp1FO1X
33	PEM1Ab/U	81	Rp1FO3J
34	PEM1B	82	Rp1FO3U
35	PEM1B/U	83	Rp1FO3X
36	PEM1Eb	84	Rp1SS10J/X
37	PEM1Eb/U	85	Rp1SS10U
38	PEM1Ei	86	Rp1SS10X
39	PEM1H	87	Rp1SS1J
40	PEM1I	88	Rp1SS1J/X
41	PEM1J	89	Rp1SS1U
42	PEM1J/U	90	Rp1SS1X
43	PEM1U	91	Rp1SS3J
44	PEM2A	92	Rp1SS3J/U
45	PEM2Ab	93	Rp1SS3J/X
46	PFO10B	94	Rp1SS3U
47	PFO10Eb	95	Rp1SS3U/X
48	PFO10I	96	Rp1SS3X

Table 3. Acreages of Cowardin wetlands and riparian systems within the Giacomini Wetland Restoration Project Delineation Study Area.

<i>Wetlands code</i>	<i>Classification</i>	<i>Giacomini Ranch & SLC and County Park Lands</i>		<i>Olema Marsh and Bear Valley Creek</i>		<i>Delineation Study Area Total</i>	
		<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>
E1UB3V	Estuarine subtidal unconsolidated bottom gravel/cobble Permanently flooded – Tidal	1	0.79	0	0.0	1	0.79
E1UB3L	Estuarine subtidal unconsolidated bottom mud Subtidal	3	11.26	0	0.0	3	11.26
E1UB3M	Estuarine subtidal unconsolidated bottom mud Irregularly exposed	6	31.78	0	0.0	6	31.78
E1UB3R	Estuarine subtidal unconsolidated bottom mud Seasonally flooded - Tidal	1	1.06	0	0.0	1	1.06
E1UB3V	Estuarine subtidal unconsolidated bottom mud Permanently flooded - Tidal	1	1.93	0	0.0	1	1.93
E2AB3N	Estuarine intertidal aquatic bed rooted vascular Regularly flooded	2	0.21	0	0.0	2	0.21
E2AB4V	Estuarine intertidal aquatic bed floating vascular Permanently flooded - Tidal	2	0.64	0	0.0	2	0.64
E2EM1L	Estuarine intertidal emergent persistent Subtidal	1	1.22	0	0.0	1	1.22
E2EM1M	Estuarine intertidal emergent persistent Irregularly exposed	4	0.33	0	0.0	4	0.33
E2EM1N	Estuarine intertidal emergent persistent Regularly flooded	55	8.10	0	0.0	55	8.10
E2EM1N/ Pm	Estuarine intertidal emergent persistent Regularly flooded/Irregularly flooded <MHHW	1	0.42	0	0.0	1	0.42
E2EM1Pm	Estuarine intertidal emergent persistent irregularly flooded <MHHW	14	17.13	0	0.0	14	17.13
E2EM1Ph	Estuarine intertidal emergent persistent irregularly flooded >MHHW	39	14.71	0	0.0	39	14.71
E2EM1Q	Estuarine intertidal emergent persistent Saturated - Tidal	81	179.74	0	0.0	81	179.74
E2EM1R	Estuarine intertidal emergent persistent Seasonally flooded - Tidal	33	23.90	0	0.0	33	23.90
E2EM1S	Estuarine intertidal emergent persistent Temporarily flooded – Tidal	21	19.77	0	0.0	21	19.77
E2EM1T	Estuarine intertidal emergent persistent Semipermanently flooded – Tidal	13	14.04	0	0.0	13	14.04
E2EM1U	Estuarine intertidal emergent persistent Upland	15	3.83	0	0.0	15	3.83
E2EM1V	Estuarine intertidal emergent persistent Permanently flooded – Tidal	7	0.28	0	0.0	7	0.28
E2EM2S	Estuarine intertidal emergent non-persistent Temporarily flooded – Tidal	2	0.36	0	0.0	2	0.36
E2FO1L	Estuarine intertidal forested broad-leaved deciduous Subtidal	0	0.0	1	0.79	1	0.79
E2FO1Pm	Estuarine intertidal forested broad-leaved deciduous Irregularly flooded at tides <MHHW	2	0.17	0	0.0	2	0.17
E2SS1L	Estuarine intertidal scrub-shrub broad-leaved deciduous Subtidal	1	0.27	0	0.0	1	0.27

Table 3. Acreages of Cowardin wetlands and riparian systems within the Giacomini Wetland Restoration Project Delineation Study Area.

<i>Wetlands code</i>	<i>Classification</i>	<i>Giacomini Ranch & SLC and County Park Lands</i>		<i>Olema Marsh and Bear Valley Creek</i>		<i>Delineation Study Area Total</i>	
		<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>
E2SS1Pm	Estuarine intertidal scrub-shrub broad-leaved deciduous Irregularly flooded <MHHW	4	0.15	0	0.0	4	0.15
E2SS1Ph/X	Estuarine intertidal scrub-shrub broad-leaved deciduous Irregularly flooded >MHHW/Phreatophytic	1	0.27	0	0.0	1	0.27
PAB3Ei	Palustrine aquatic bed rooted vascular Seasonally flooded-permanently saturated	1	0.62	0	0.0	1	0.62
PAB3H	Palustrine aquatic bed rooted vascular Permanently flooded	10	3.43	7	3.99	17	7.42
PAB4H	Palustrine aquatic bed floating vascular Permanently flooded	1	0.93	1	0.04	2	0.97
PEM1/2Eb	Palustrine emergent persistent/non-persistent Seasonally flooded-seasonally saturated	0	0.0	1	0.08	1	0.08
PEM1A	Palustrine emergent persistent Temporarily flooded	8	1.39	3	0.03	11	1.42
PEM1Ab	Palustrine emergent persistent Temporarily flooded-seasonally saturated	12	11.48	1	0.06	13	11.54
PEM1Ab/B	Palustrine emergent persistent Temporarily flooded-seasonally saturated/Seasonally saturated	1	10.40	0	0.0	1	10.40
PEM1Ab/U	Palustrine emergent persistent Temporarily flooded-seasonally saturated/Upland	2	4.39	0	0.0	2	4.39
PEM1B	Palustrine emergent persistent Seasonally saturated	36	91.86	4	0.23	40	92.09
PEM1B/U	Palustrine emergent persistent Seasonally saturated/Upland	4	24.41	0	0.00	4	24.41
PEM1Eb	Palustrine emergent persistent Seasonally flooded-seasonally saturated	30	13.78	5	0.14	35	13.92
PEM1Eb/U	Palustrine emergent persistent Seasonally flooded-seasonally saturated/Upland	1	9.25	0	0.0	1	9.25
PEM1Ei	Palustrine emergent persistent Seasonally flooded-permanently saturated	31	5.58	2	0.32	33	5.90
PEM1H	Palustrine emergent persistent Permanently flooded	15	3.05	40	34.98	55	38.03
PEM1I	Palustrine emergent persistent Permanently saturated	1	0.04	0	0.0	1	0.04
PEM1J/U	Palustrine emergent persistent Intermittently flooded/Upland	11	23.44	0	0.0	11	23.44
PEM1U	Palustrine emergent persistent Upland	24	4.95	1	0.11	25	5.06
PEM2A	Palustrine emergent non-persistent Temporarily flooded	2	0.06	0	0.0	2	0.06
PEM2Ab	Palustrine emergent non-persistent Temporarily flooded-seasonally saturated	5	1.17	0	0.0	5	1.17
PFO10B	Palustrine forested mixed evergreen/deciduous Seasonally saturated	1	1.32	0	0.0	1	1.32
PFO10Eb	Palustrine forested mixed evergreen/deciduous Seasonally flooded-seasonally saturated	0	0.0	3	0.56	3	0.56

Table 3. Acreages of Cowardin wetlands and riparian systems within the Giacomini Wetland Restoration Project Delineation Study Area.

<i>Wetlands code</i>	<i>Classification</i>	<i>Giacomini Ranch & SLC and County Park Lands</i>		<i>Olema Marsh and Bear Valley Creek</i>		<i>Delineation Study Area Total</i>	
		<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>
PFO10I	Palustrine forested mixed evergreen/deciduous Permanently saturated	1	10.92	0	0.0	1	10.92
PFO1Ab	Palustrine forested broad leaved deciduous Temporarily flooded-seasonally saturated	0	0.0	3	0.93	3	0.93
PFO1Ab/Eb	Palustrine forested broad leaved deciduous Temporarily flooded-seasonally saturated/Seasonally flooded-seasonally saturated	2	1.80	0	0.0	2	1.80
PFO1B	Palustrine forested broad leaved deciduous Seasonally saturated	1	0.15	0	0.0	1	0.15
PFO1Eb	Palustrine forested broad leaved deciduous Seasonally flooded-seasonally saturated	2	0.43	6	2.47	8	2.90
PFO1Ei	Palustrine forested broad leaved deciduous Seasonally flooded-permanently saturated	6	1.31	5	6.25	11	7.56
PFO1Ei/X	Palustrine forested broad leaved deciduous Seasonally flooded-permanently saturated/Phreatophytic	6	4.0	0	0.0	6	4.0
PFO1H	Palustrine forested broad leaved deciduous Permanently flooded	0	0.0	9	8.07	9	8.07
PFO1H/A	Palustrine forested broad leaved deciduous Permanently flooded/Temporarily flooded	1	0.42	0	0.0	1	0.42
PFO1I	Palustrine forested broad leaved deciduous Permanently saturated	0	0.0	2	0.44	2	0.44
PFO3B/X	Palustrine forested broad leaved evergreen Seasonally saturated/Phreatophytic	1	0.19	0	0.0	1	0.19
PFO3Eb	Palustrine forested broad leaved evergreen Seasonally flooded-seasonally saturated	1	0.10	0	0.0	1	0.10
PFO3F/D	Palustrine forested broad leaved evergreen Semipermanently flooded/Seasonally flooded-well drained	1	0.19	0	0.0	1	0.19
PSS10A	Palustrine scrub shrub mixed evergreen/deciduous Temporarily flooded	0	0.0	1	0.03	1	0.03
PSS10Ai	Palustrine scrub shrub mixed evergreen/deciduous Temporarily flooded-permanently saturated	1	0.38	0	0.0	1	0.38
PSS10Eb	Palustrine scrub shrub mixed evergreen/deciduous Seasonally flooded-seasonally saturated	0	0.0	1	0.04	1	0.04
PSS10I	Palustrine scrub shrub mixed evergreen/deciduous Permanently saturated	1	0.03	0	0.0	1	0.03
PSS1Ab	Palustrine scrub shrub broad leaved deciduous Temporarily flooded-seasonally saturated	4	1.48	0	0.0	4	1.48
PSS1B	Palustrine scrub shrub broad leaved deciduous Seasonally saturated	1	0.10	0	0.0	1	0.10
PSS1Eb	Palustrine scrub shrub broad leaved deciduous Seasonally flooded-seasonally saturated	6	1.68	1	0.02	7	1.70
PSS1Ei	Palustrine scrub shrub broad leaved deciduous Seasonally flooded-permanently saturated	1	1.63	6	0.10	7	1.73
PSS1H	Palustrine scrub shrub broad leaved deciduous Permanently flooded	2	0.15	6	0.68	8	0.83
PSS3Ab	Palustrine scrub shrub broad leaved evergreen Temporarily flooded-seasonally saturated	2	0.07	0	0.0	2	0.07

Table 3. Acreages of Cowardin wetlands and riparian systems within the Giacomini Wetland Restoration Project Delineation Study Area.

<i>Wetlands code</i>	<i>Classification</i>	<i>Giacomini Ranch & SLC and County Park Lands</i>		<i>Olema Marsh and Bear Valley Creek</i>		<i>Delineation Study Area Total</i>	
		<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>
PSS3Ei	Palustrine scrub shrub broad leaved evergreen Seasonally flooded-permanently saturated	1	0.02	0	0.0	1	0.02
PSS3I	Palustrine scrub shrub broad leaved evergreen Permanently saturated	1	0.39	0	0.0	1	0.39
PUB1H	Palustrine unconsolidated bottom cobble-gravel Permanently flooded	0	0.0	1	0.06	1	0.06
PUB3/4H	Palustrine unconsolidated bottom mud/organic Permanently flooded	0	0.0	13	5.54	13	5.54
PUB3T	Palustrine unconsolidated bottom mud Semipermanently flooded-Tidal	1	0.08	0	0.0	1	0.08
Rp1FO10X	Riparian lotic forested mixed evergreen/deciduous Phreatophytic	0	0.0	3	0.25	3	0.25
Rp1FO1A	Riparian lotic forested broad leaved deciduous Temporarily flooded	0	0.0	1	0.15	1	0.15
Rp1FO1J	Riparian lotic forested broad leaved deciduous Intermittently flooded	0	0.0	2	0.51	2	0.51
Rp1FO1J/X	Riparian lotic forested broad leaved deciduous Intermittently flooded/Phreatophytic	3	1.47	4	6.26	7	7.73
Rp1FO1X	Riparian lotic forested broad leaved deciduous Phreatophytic	8	1.61	4	1.59	12	3.20
Rp1FO3J	Riparian lotic forested broad leaved evergreen Intermittently flooded	0	0.0	3	0.51	3	0.51
Rp1FO3U	Riparian lotic forested broad leaved evergreen Upland	1	0.76	0	0.0	1	0.76
Rp1FO3X	Riparian lotic forested broad leaved evergreen Phreatophytic	4	0.77	1	0.10	5	0.87
Rp1SS10J/X	Riparian lotic scrub shrub mixed evergreen/deciduous Intermittently flooded/Phreatophytic	2	0.28	1	0.26	3	0.54
Rp1SS10U	Riparian lotic scrub shrub mixed evergreen/deciduous Upland	1	0.03	1	0.01	2	0.04
Rp1SS10X	Riparian lotic scrub shrub mixed evergreen/deciduous Phreatophytic	2	0.46	4	1.84	6	2.30
Rp1SS1J	Riparian lotic scrub shrub broad leaved deciduous Intermittently flooded	1	0.05	3	0.39	4	0.44
Rp1SS1J/X	Riparian lotic scrub shrub broad leaved deciduous Intermittently flooded/Phreatophytic	12	11.24	4	0.72	16	11.96
Rp1SS1U	Riparian lotic scrub shrub broad leaved deciduous Upland	2	0.32	0	0.0	2	0.32
Rp1SS1X	Riparian lotic scrub shrub broad leaved deciduous Phreatophytic	7	3.24	5	0.41	12	3.65
Rp1SS3J	Riparian lotic scrub shrub broad leaved evergreen Intermittently flooded	0	0.0	8	0.46	8	0.46
Rp1SS3J/U	Riparian lotic scrub shrub broad leaved evergreen Intermittently flooded/Upland	5	0.38	0	0.0	5	0.38
Rp1SS3J/X	Riparian lotic scrub shrub broad leaved evergreen Intermittently flooded/Phreatophytic	1	0.20	0	0.0	1	0.20
Rp1SS3U	Riparian lotic scrub shrub broad leaved evergreen Upland	16	2.10	6	0.32	22	2.42
Rp1SS3X/U	Riparian lotic scrub shrub broad leaved evergreen Phreatophytic/Upland	3	0.24	0	0.0	3	0.24

Table 3. Acreages of Cowardin wetlands and riparian systems within the Giacomini Wetland Restoration Project Delineation Study Area.

<i>Wetlands code</i>	<i>Classification</i>	<i>Giacomini Ranch & SLC and County Park Lands</i>		<i>Olema Marsh and Bear Valley Creek</i>		<i>Delineation Study Area Total</i>	
		<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>	<i>Poly No.</i>	<i>Acres</i>
Rp1SS3X	Riparian lotic scrub shrub broad leaved evergreen Phreatophytic	10	0.98	1	0.01	11	0.99
TOTAL		631	593.36	169	79.7	800	673.06

WETLANDS SUBJECT TO PARK SERVICE AND CCC OVERSIGHT

Wetlands Subject to Executive Order 11990

Director's Order #77-1 established Park Service policies, requirements, and standards for implementing Executive Order 11990, which directs federal agencies "...to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct and indirect support of new construction in wetlands wherever there is a practicable alternative..." The Park Service uses the Cowardin classification system (Cowardin et al. 1979) as the standard for defining, classifying, and inventorying wetlands that might be subject to adverse impacts.

Park Service lands within the Delineation Study Area generally include the Giacomini Ranch and portions of Bear Valley Creek upstream of Bear Valley Road and the southern 14.0 acres of Olema Marsh. Based on our survey, 446.7 acres within the Delineation Study Area may be subject to Executive Order 11990 (Figure 13; Sheets 1-2).

Wetlands Subject to Potential Regulatory Oversight by the CCC

Within California, the California Coastal Commission (CCC) administers the state program (California Coastal Act) for implementation of the federal Coastal Zone Management Act (CZMA). Any action by a federal agency such as the Park Service requires a federal consistency determination by the CCC as required by CZMA. The CCC reviews all proposed wetland development projects within the California coastal zone. In the coastal zone, the CCC, with assistance from CDFG, is responsible for determining the presence and size of wetlands subject to regulation under the California Coastal Act (1976). The CCC has adopted the CDFG wetland definition and classification system, which is a modified version of the Cowardin classification system.

The entire Delineation Study Area is located within the Coastal Zone, so, based on our survey, 673.1 acres within the Delineation Study Area may potentially subject to regulatory oversight by the CCC as wetlands (Figure 13; Sheets 1-2).



Golden Gate National Recreation Area

Giacomini Wetland Restoration Project

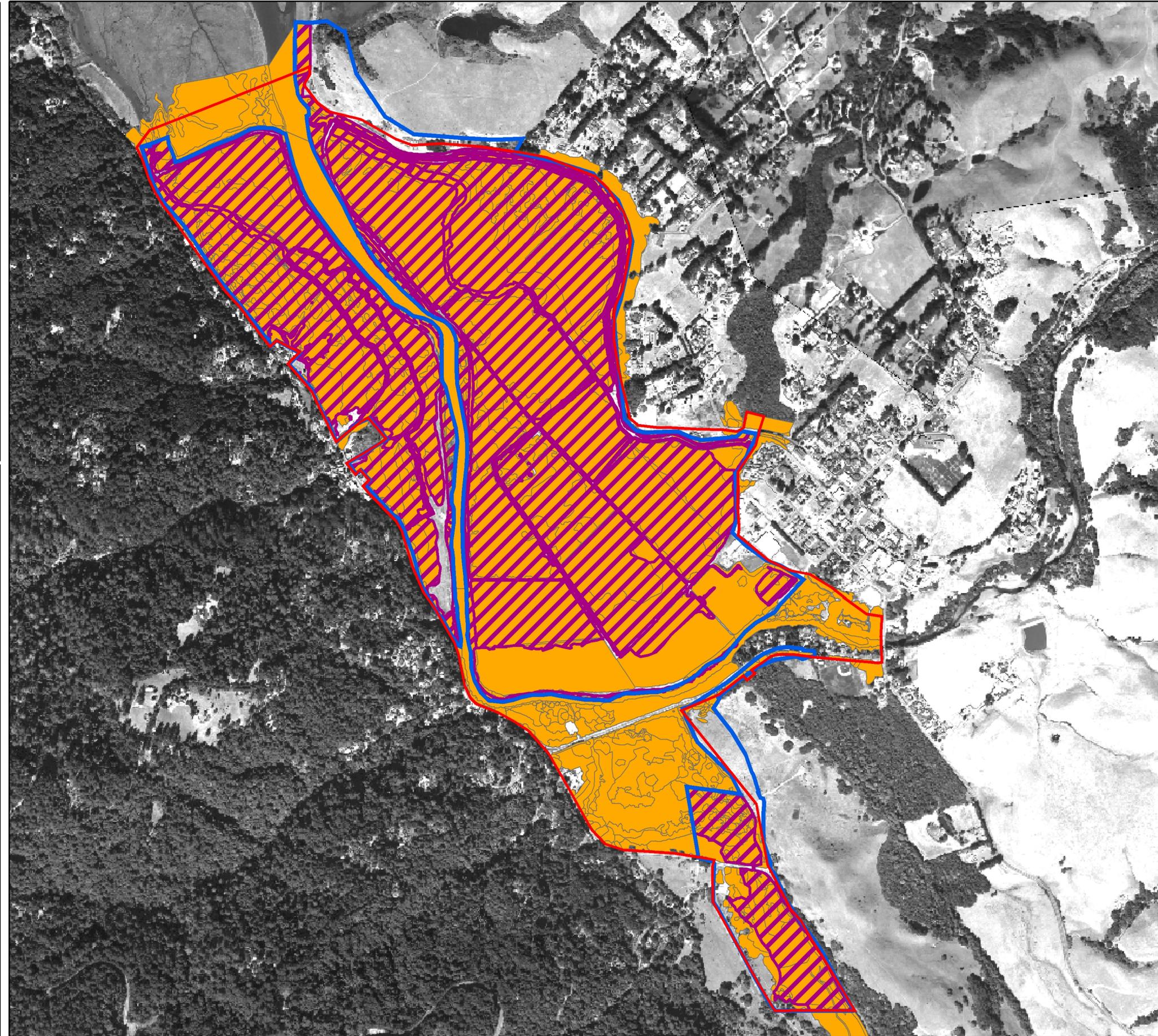
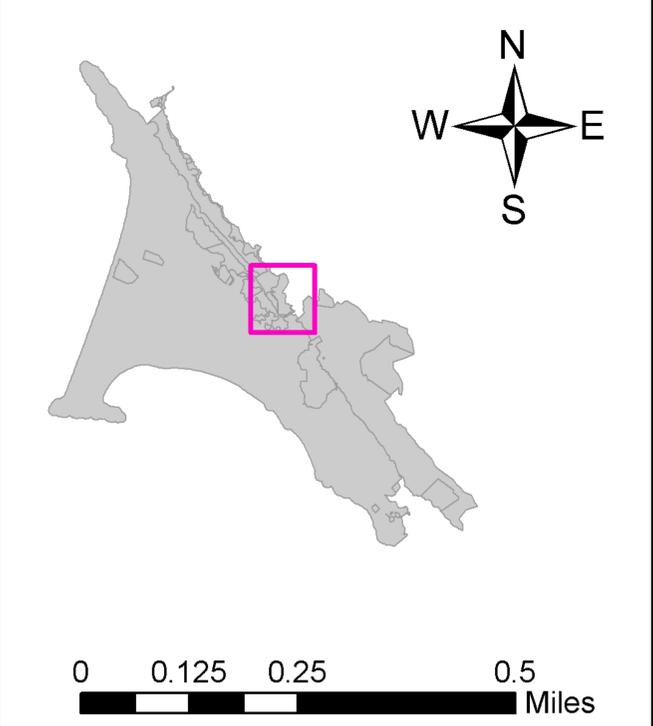


Figure 13. Wetlands delineated within the Giacomini Wetland Restoration Project Boundary according to Park Service and California Coastal Commission wetland delineation methodologies.

-  NPS Boundary in Giacomini Project Area
-  Delineation Study Area
- Wetland Types**
-  Potential Coastal Commission Wetlands
-  Potential NPS Wetlands



Natural Park Service
Point Reyes National Seashore
Natural Resources

OTHER REGULATORY ISSUES

The wetlands identified in this study may be subject to the jurisdiction of other regulatory agencies such as the Corps, the Regional Water Quality Control Board (RWQCB), San Francisco District, and, through the federal Endangered Species Act, the FWS and NOAA Fisheries.

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APPENDICES

Appendix A: Modified Cowardin Classification System

SYSTEM-SUBSYSTEM-CLASS CHART

SYSTEMS	Marine (M)		Estuarine (E)		Riverine (R)				Lacustrine (L)		Palustrine (P)
	1 ST	2 IT	1 ST	2 IT	1 T	2 LP	3 UP	4 I	1 LIM	2 LIT	
SUB-SYSTEMS											--
CLASSES											
RB	X		X		X	X	X		X	X	X
UB	X		X		X	X	X		X	X	X
AB	X	X	X	X	X	X	X		X	X	X
RF	X	X	X	X							
US		X		X	X	X	X			X	X
RS		X		X	X	X	X			X	
SB				X	X			X			
ML											X
EM				X	X	X				X	X
SS				X							X
FO				X							X

CLASS DESCRIPTION

CODE	CLASS	DESCRIPTION
RB	Rock bottom	Over 75% cover of stones, boulders, or bedrock and < 30% veg cover.
UB	Unconsolidated bottom	At least 25% cover of particles smaller than stones and < 30% veg cover.
AB	Aquatic bed	Dominated by plants that grow on or below the surface water in most years.
RF	Reef	Ridge/mound-like structures dominated by colonized sedentary invertebrates.
US	Unconsolidated shore	Must have: 1) unconsolidated substrate with < 75% cover of stones boulders or bedrock, 2) veg cover < 30%, and 3) saturated, irregularly exposed, or regularly, irregularly, seasonal, intermit, temp, or artificially flooded.
RS	Rocky shore	Over 75% cover of bedrock, stones or boulders and < 30% veg cover.
SB	Streambed	Vary greatly in substrate and for. Most have little to no veg cover due to scouring.
ML	Moss-lichen	Veg cover < 30% and mosses or lichens cover substrates other than rock.
EM	Emergent	Erect, rooted, herbaceous hydrophytes present most of growing season in most years.
SS	Scrub-shrub	Dominant veg is woody plants < 6m (20 feet) tall.
FO	Forested	Dominant veg is woody plants > 6m (20 feet) tall.

WATER REGIMES AND CLASSES

NON TIDAL	RB	UB	AB	RF	US	RS	SB	ML	EM	SS	FO
H (Perm. Flooded)	X	X	X						X	X	X
G (Intermitt. Exposed)	X	X	X						X	X	X
F (Semiperm. Flooded)	X	X	X						X	X	X
I (Saturated – Permanent)									X	X	X
E (Saturated - Seasonal)									X	X	X
Ei (Seasonally flooded- Permanently saturated)	X	X							X	X	X
Eb (Seasonally flooded- Temporarily saturated)	X	X							X	X	X
D (Seasonally flooded - Well drained)	X	X							X	X	X
C (Seasonally Flooded)	X	X	X		X	X	X		X	X	X
B (Saturated - Seasonal)					X			X	X	X	X
A (Temporarily flooded)	X	X			X	X	X		X	X	X
Ab (Temporarily flooded – Seasonally saturated)	X	X			X		X		X	X	X
Ai (Temporarily flooded – Permanently saturated)	X	X			X		X		X	X	X
J (Intermittently Flooded)	X	X			X	X	X		X	X	X

WATER REGIMES AND CLASSES (Cont.).

NON –TIDAL (cont.)	RB	UB	AB	RF	US	RS	SB	ML	EM	SS	FO
Y (Satur./Semiperm/Season)									X	X	X
X (Phreatophytic)										X	X
U (Upland)									X	X	X
FRESHWATER -TIDAL	RB	UB	AB	RF	US	RS	SB	ML	EM	SS	FO
Q (Saturated –Tidal)									X	X	X
R (Seasonally flooded – Tidal)			X		X	X	X		X	X	X
S (Temporarily flooded-Tidal)					X	X	X		X	X	X
T (Semipermanently flooded – Tidal)	X	X	X						X	X	X
V (Permanently flooded –Tidal)	X	X	X						X	X	X
TIDAL	RB	UB	AB	RF	US	RS	SB	ML	EM	SS	FO
K (Artificially flooded)	X	X	X		X		X		X	X	X
L (Subtidal < MLLW)	X	X	X	X							
M (Irregularly exposed – MLLW - MTL)			X	X	X	X	X			X	X
N (Regularly flooded – MTL - MHW)			X	X	X	X	X		X	X	X
Pm (Irregularly flooded – MHW-MHHW)									X	X	X
Ph (Irregularly flooded < MHHW)									X	X	X

Bold-faced entries refer to internal modifications to Cowardin water regime classification system.

WATER REGIME MODIFIER DESCRIPTION

Tidal	Description
K (Artificially Flooded)	Duration of flooding is controlled by artificial means (i.e. pumps, siphons, dikes, dams, etc.)
L (Subtidal)	Permanently flooded with tidal water. Occurs at elevations below Mean Lower Low Water (MLLW).
M (Irregularly Exposed)	Land surface exposed by tides less often than daily. Occurs at elevations between MLLW and Mean Tide Line (MTL).
N (Regularly Exposed)	Tidal water alternately floods and exposes the land surface at least once daily. Occurs at elevations between MTL and Mean High Water (MHW or OHW)
Pm (Irregularly Flooded)	Tidal water floods the land surface less often than daily. Areas that are flooded at tides between MHW and MHHW. Typically flooded during the higher high tides.
Ph (Irregularly Flooded)	Tidal water floods the land surface less often than daily. Areas that are flooded at tides > MHHW, typically only the highest high tides and flood tides.
Non-Tidal	Description
A (Temporarily Flooded)	Surface water is present for brief periods during the year. For our purposes, “brief” is defined roughly as at least 10-14 days during the year, but could extend up to 30 days.
Ab (Temporarily Flooded, Seasonally Saturated)	Surface water is present for brief periods during the year, followed by some period of saturation. For our purposes, “brief” flooding is defined roughly as at least 10-14 days and up to 30 days of inundation during the year, followed by potentially 1-6 months of soil saturation.

WATER REGIME MODIFIER DESCRIPTION (Cont.)

Non-Tidal	Description
Ai (Temporarily Flooded, Permanently Saturated)	Surface water is present for brief periods during the year, followed by permanently saturated conditions. For our purposes, “brief” flooding is defined roughly as at least 10-14 days and up to 30 days of inundation each year, followed by permanently saturated conditions.
B (Saturated-Seasonal)	Surface water is seldom present, but substrate is saturated to the surface for extended periods. For our purposes, “extended” is defined as ranging from 30 days up to 6 months.
C (Seasonally Flooded)	Surface water is present for extended periods, especially after seasonal rainfall and/or runoff. For our purposes, “extended” is defined as ranging from 30 days up to 6 months.
D (Seasonally Flooded/ Well Drained)	Surface water is present for extended periods, but drains relatively rapidly after seasonal rainfall and/or run-off ceases. For our purposes, “extended” is defined as ranging from 30 days up to 6 months.
Eb (Seasonally Flooded/ Seasonally Saturated)	Surface water is present for extended periods (at least 30 days and up to 6 months), with soils remaining saturated for the same amount of time after flooding has disappeared.
Ei (Seasonally Flooded/ Perm. Saturated)	Surface water is present for extended periods (at least 30 days and up to 6 months), with soils remaining permanently saturated throughout the year.
F (Semipermanently Flooded)	Surface water persists throughout the year in most years.
G (Intermittently Exposed)	Surface water present throughout the year except in extreme drought.
H (Permanently Flooded)	Land inundated throughout year in all years.
I (Saturated – Permanent)	Surface water is seldom present, but substrate is saturated to the surface throughout the year.
J (Intermittently Flooded)	Substrate usually exposed, but surface water is present for variable periods w/o detectable seasonal periodicity. For our purposes, “intermittent” was defined as less than 10 to 14 days, with flooding often only during peak storm flow discharge or only for hours or days after peak discharge.
K (Artificially Flooded)	Duration of flooding is controlled by artificial means (i.e. pumps, siphons, dikes, dams, etc.)
X (Phreatophytic)	Surface water may be present episodically after major storm events, but plants reliant on water tables below the soil surface (>1.5 feet).
U (Upland)	Wetland hydrology does not appear to exist, with flooding occurring only under extreme flooding conditions (50- to 100-year floods) and only temporarily.
Freshwater -Tidal	Description
Q, S, R, T, V	If Palustrine, Riverine, and Lacustrine wetlands are only irregularly flooded by tides, these are designated by the appropriate nontidal Water Regime modifier with the word, “Tidal,” added. For our purposes, we used this designation to indicate areas that are only indirectly influenced by tides such as tidally driven hydraulic pressure on the underlying “fresh” groundwater table.

* Bold-faced entries refer to internal modifications to Cowardin water regime classification system.

SPECIAL MODIFIERS

b- Beaver	d- Partially Drained/ Ditched	f- Farmed	h- Diked/ Impound ed	r- Artificial Substrate	s- Spoil	x- Excav- ated	g- Grazed	i- Irrigated
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Appendix B: Codes used for Modified Cowardin Classification System

SYSTEM	SUBSYSTEM	NWI CODE
Marine	Subtidal	M1
	Intertidal	M2
Estuarine	Subtidal	E1
	Intertidal	E2
Palustrine	--	P
Lacustrine	Limnetic	L1
	Littoral	L2
Riverine	Tidal	R
	Lower Perennial	LP
	Upper Perennial	UP
	Intermittent	I
Riparian	Lotic	Rp1
	Lentic	Rp2

CLASS	NWI CODE
Rock Bottom	RB
Unconsolidated Bottom	UB
Aquatic Bed	AB
Reef	RF
Unconsolidated Shore	US
Rocky Shore	RS
Streambed	SB
Moss-Lichen Wetland	ML
Emergent Wetland	EM
Scrub-shrub Wetland	SS
Forested Wetland	FO

WATER REGIME	NWI CODE
Tidal	
Subtidal (<MLLW)	L
Irregularly Exposed (MLLW-MTL)	M
Regularly Flooded (MTL – MHW)	N
Irregularly Flooded – MHW-MHHW	Pm
Irregularly Flooded - >MHHW	Ph
Freshwater - Tidal	
Saturated -Tidal	Q
Seasonally Flooded -Tidal	R
Temporarily Flooded - Tidal	S
Semi-permanently Flooded - Tidal	T
Permanently Flooded - Tidal	V
Non-Tidal	
Temporarily Flooded	A
Temporarily Flooded-Seasonally Saturated	Ab
Temporarily Flooded-Permanently Saturated	Ai
Saturated - Seasonally	B
Seasonally Flooded	C
Seasonally Flooded/Well Drained	D
Seasonally Flooded-Seasonally Saturated	Eb
Seasonally Flooded-Permanently Saturated	Ei
Semi-permanently Flooded	F
Intermittently Exposed	G
Permanently Flooded	H
Saturated – Permanent	I

SPECIAL MODIFIERS	NWI CODE
Beaver	b
Partially drained/Ditched	d
Farmed	f
Diked/Impounded	h
Artificial Substrate	r
Spoil	s
Excavated	x
Grazed	g

Non-Tidal (Cont.).	
Intermittently Flooded	J
Artificially Flooded	K
Saturated/Semipermanently/Seasonally Flooded	Y
Phreatophytic	X
Upland	U

* **Bold-faced entries refer to internal modifications to Cowardin water regime classification system.**

**Appendix C. List of Plant Species Observed in the
Giacomini Wetland Restoration Project
Delineation Study Area**

Appendix Table C-1. List of Plant Species Observed Within the Giacomini Wetland Restoration Study Area. Initials in table columns refer to areas observed within Study Area: key is provided at back of table.

Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Aceraceae																
<i>Acer negundo</i> var. <i>californicum</i>	box elder			X			X	X		X						
Anacardiaceae																
<i>Toxicodendron diversilobum</i>	poison oak		X	X		X	X	X		X						
Apiaceae																
<i>Conium maculatum</i>	poison hemlock		X	X			X	X				X				
<i>Eryngium armatum</i>						X										X
<i>Foeniculum vulgare</i>	fennel		X	X			X	X				X				
<i>Heracleum lanatum</i>	cow parsnip			X				X								
<i>Hydrocotyle ranunculooides</i>			X	X		X					X			X		
<i>Lomatium dasycarpum</i>				X												
<i>Oenanthe sarmentosa</i>			X	X			X	X			X					
<i>Sanicula bipinnatifida</i>	purple sanicle							X								
<i>Scandix pecten- veneris</i>	Venus' needle					X										X
<i>Torilis arvensis</i>				X								X				
Apocynaceae																
<i>Vinca major</i>	greater periwinkle			X				X		X						
Aquifoliaceae																
<i>Ilex aquifolium</i>	English holly			X						X						X
Araceae																
<i>Lysichiton americanum</i>	yellow skunk cabbage			X				X		X						X
Araliaceae																
<i>Aralia californica</i>	elk clover			X						X						X
<i>Hedera helix</i>	English ivy			X			X			X						X

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Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Asteraceae																
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	hayfield tarweed					X		X								X
<i>Hypochaeris glabra</i>	smooth cat's ear		X	X												
<i>Hypochaeris radicata</i>	rough cat's ear		X	X		X						X				X
<i>Jaumea carnosa</i>	jaumea		X	X	X	X			X							
<i>Lactuca serriola</i>	prickly lettuce		X	X								X				
<i>Lessingia filaginifolia</i> var. <i>californica</i>	California-aster					X										X
<i>Madia sativa</i>	coast tarweed		X	X								X				
<i>Picris echioides</i>	bristly ox-tongue		X	X		X	X					X				
<i>Senecio vulgaris</i>	ragwort		X	X			X									
<i>Silybum marianum</i>	milk thistle		X	X		X	X	X		X		X				
<i>Sonchus asper</i> ssp. <i>asper</i>	prickly sow thistle		X	X				X		X		X				
<i>Sonchus oleraceus</i>	common sow thistle			X				X		X						
<i>Taraxacum officinale</i>	dandelion		X	X		X	X	X		X		X	X			
<i>Xanthium spinosum</i>	spiny cocklebur			X		X					X					
<i>Xanthium strumarium</i>	cocklebur		X									X				
Azollaceae																
<i>Azolla filiculoides</i>			X	X				X			X					
Betulaceae																
<i>Alnus rubra</i>	alder			X			X	X		X						
<i>Corylus cornuta</i> var. <i>californica</i>	California hazelnut			X				X		X						
Blechnaceae																
<i>Blechnum spicant</i>	deer fern			X								X				

Appendix Table C-1. List of Plant Species Observed Within the Giacomini Wetland Restoration Study Area. Initials in table columns refer to areas observed within Study Area: key is provided at back of table.

Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Boraginaceae																
<i>Borago officinalis</i>				X						X						
<i>Myosotis discolor</i>	forget-me-not							X		X						
<i>Myosotis latifolia</i>	forget-me-not							X								
<i>Plagiobothrys stipitatus</i> var. <i>micranthus</i>	popcorn flower					X										X
Brassicaceae																
<i>Barbarea orthoceras</i>	common winter cress			X												
<i>Barbarea vulgaris</i>	common wintercress		X													
<i>Brassica nigra</i>	black mustard		X	X		X	X	X		X		X				
<i>Brassica rapa</i>	field mustard															
<i>Capsella bursa-pastoris</i>	shepherd's purse			X												
<i>Cardamine oligosperma</i>	bitter-cress		X				X	X		X	X					
<i>Lepidium campestre</i>	peppergrass		X	X												
<i>Raphanus raphanistrum</i>	jointed charlock		X	X								X				
<i>Raphanus sativus</i>	wild radish		X	X				X				X				
<i>Rorippa curvisiliqua</i>	water cress		X	X							X				X	
<i>Rorippa nasturtium-aquaticum</i>	water cress		X	X							X			X		
<i>Rorippa palustris</i> var. <i>occidentalis</i>	water cress										X					
<i>Sisymbrium officinale</i>	hedge mustard		X			X										
Callitrichaceae																
<i>Callitriche heterophylla</i> var. <i>bolanderi</i>	water starwort					X					X					

Appendix Table C-1. List of Plant Species Observed Within the Giacomini Wetland Restoration Study Area. Initials in table columns refer to areas observed within Study Area: key is provided at back of table.

Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Caprifoliaceae																
<i>Lonicera hispidula</i> var. <i>vacillans</i>	honeysuckle					X				X						
<i>Lonicera involucrata</i> var. <i>ledebourii</i>	twinberry			X		X	X			X						
<i>Sambucus mexicana</i>	blue elderberry			X								X				
<i>Sambucus racemosa</i> var. <i>racemosa</i>	red elderberry			X						X						
<i>Symphoricarpos albus</i> var. <i>laevigatus</i>	snowberry			X			X			X						
<i>Symphoricarpos mollis</i>	creeping snowberry			X						X						
Caryophyllaceae																
<i>Cerastium arvense</i>	field chickweed			X												
<i>Cerastium fontanum</i> ssp. <i>vulgare</i>	mouse-ear chickweed															
<i>Cerastium glomeratum</i>	mouse-ear chickweed		X	X		X										X
<i>Silene gallica</i>	campion		X	X								X				
<i>Spergula arvensis</i> ssp. <i>arvensis</i>	starwort			X								X				
<i>Spergularia bocconii</i>	sand-spurrey		X													
<i>Spergularia macrotheca</i> var. <i>macrotheca</i>	sand-spurrey		X	X				X								
<i>Spergularia rubra</i>	sand-spurrey		X	X				X			X	X				
<i>Stellaria media</i>	common chickweed		X													
Chenopodiaceae																
<i>Atriplex triangularis</i>	spearscale		X	X				X	X		X				X	

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Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Iridaceae																
<i>Sisyrinchium bellum</i>	blue-eyed-grass		X			X						X				X
<i>Sisyrinchium californicum</i>	golden-eyed-grass			X									X			
Juncaceae																
<i>Juncus balticus</i>	rush		X	X		X	X					X		X		
<i>Juncus bolanderi</i>	rush			X						X	X					
<i>Juncus bufonius</i> var. <i>bufonius</i>	toad rush			X										X		
<i>Juncus bufonius</i> var. <i>occidentalis</i>	toad rush			X		X										
<i>Juncus capitatus</i>	annual rush			X		X		X								
<i>Juncus effusus</i> var. <i>brunneus</i>	rush		X	X		X	X				X					
<i>Juncus effusus</i> var. <i>pacificus</i>	rush		X	X												
<i>Juncus lesueurii</i>	rush		X	X		X		X								
<i>Juncus occidentalis</i>	rush					X										
<i>Juncus patens</i>	rush		X	X		X								X	X	X
<i>Juncus phaeocephalus</i>	rush			X		X					X			X		
<i>Juncus xiphioides</i>	rush															
Juncaginaceae																
<i>Lilaea scilloides</i>	flowering-quillwort															
<i>Triglochin concinna</i> var. <i>concinna</i>	arrow-grass					X			X							
<i>Triglochin maritima</i>	seaside arrowgrass		X	X	X	X		X			X					
Lamiaceae																
<i>Lamium purpureum</i>	dead nettle		X	X						X		X				
<i>Marrubium vulgare</i>	horehound		X									X				
<i>Mentha x piperita</i>	peppermint			X							X					

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Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Lamiaceae																
<i>Mentha pulegium</i>	pennyroyal		X	X		X		X			X			X		
<i>Mentha spicata</i> var. <i>longifolia</i>	spearmint			X						X	X			X		
<i>Monardella</i> sp.						X										
<i>Prunella vulgaris</i> var. <i>lanceolata</i>	self-heal					X										
<i>Satureja douglasii</i>	yerba buena					X		X								
<i>Stachys ajugoides</i> var. <i>ajugoides</i>	hedge nettle			X		X		X		X						X
<i>Stachys ajugoides</i> var. <i>rigida</i>	hedge nettle			X				X		X			X			
<i>Stachys bullata</i>	hedge nettle															
<i>Stachys chamissonis</i>	hedge nettle			X				X		X						
Lauraceae																
<i>Umbellularia californica</i>	California bay		X	X		X		X		X						
Lemnaceae																
<i>Lemna minor</i>	duckweed		X	X		X		X			X					
<i>Lemna minuscula</i>	duckweed							X			X					
Liliaceae																
<i>Allium unifolium</i>	onion					X										X
<i>Amaryllis belladonna</i>	naked pink lady															
<i>Chlorogalum pomeridianum</i>	soap plant		X			X		X								X
<i>Smilacina</i> sp.	false solomon's seal			X						X						X
Linaceae																
<i>Linum usitatissimum</i>	common flax					X										X
Lythraceae																
<i>Lythrum hyssopifolium</i>	loosestrife		X			X	X	X			X					

Appendix Table C-1. List of Plant Species Observed Within the Giacomini Wetland Restoration Study Area. Initials in table columns refer to areas observed within Study Area: key is provided at back of table.

Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Pinaceae																
<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Douglas fir					X										
Plantaginaceae																
<i>Plantago lanceolata</i>	English plantain		X	X		X	X					X				X
<i>Plantago major</i>	common plantain		X	X			X				X		X			
<i>Plantago maritima</i> var. <i>juncooides</i>	plantain			X		X			X							
Plumbaginaceae																
<i>Limonium californicum</i>	western marsh rosemary		X	X		X			X							
Poaceae																
<i>Agrostis capillaris</i>	bent grass															
<i>Agrostis stolonifera</i>	creeping bent grass		X	X						X		X				
<i>Agrostis viridis</i>	bent grass			X												
<i>Aira caryophylla</i>	European hairgrass		X	X		X						X				X
<i>Alopecurus geniculatus</i>	water foxtail			X							X				X	
<i>Alopecurus pratensis</i>	meadow foxtail		X	X									X		X	
<i>Avena barbata</i>	slender wild oat		X	X		X	X	X				X				X
<i>Avena fatua</i>	wild oat		X													
<i>Briza maxima</i>	quaking grass		X	X		X		X				X				X
<i>Briza minor</i>	quaking grass		X			X						X				X
<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome		X	X		X						X				X
<i>Bromus catharticus</i>	rescue grass		X									X				
<i>Bromus diandrus</i>	rippgut brome		X	X		X		X				X				
<i>Bromus hordeaceus</i>	brome		X	X		X		X				X				X

Appendix Table C-1. List of Plant Species Observed Within the Giacomini Wetland Restoration Study Area. Initials in table columns refer to areas observed within Study Area: key is provided at back of table.

Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Poaceae																
<i>Paspalum dilatatum</i>	Dallis grass							X			X					
<i>Phalaris aquatica</i>	Harding grass		X	X		X		X			X	X				
<i>Phalaris arundinacea</i>	canary reed grass							X								
<i>Poa annua</i>	annual blue grass		X	X		X	X	X		X	X	X	X	X		X
<i>Poa trivialis</i>	rough bluegrass		X	X							X					
<i>Polypogon australis</i>	Chilean beard grass			X							X					
<i>Polypogon interruptus</i>	ditch beard grass		X	X		X					X			X		
<i>Polypogon monspeliensis</i>	annual beard grass		X	X		X			X							
<i>Spartina foliosa</i>	cordgrass		X		X							X				
<i>Torreyochloa pallida</i> var. <i>pauciflora</i>	weak mannagrass					X					X					
<i>Vulpia bromoides</i>			X	X		X	X	X		X		X	X			X
<i>Vulpia myuros</i> var. <i>hirsuta</i>			X	X				X					X			
Polemoniaceae																
<i>Navarretia squarrosa</i>	skunkweed			X		X										X
Polygonaceae																
<i>Polygonum arenastrum</i>	common knotweed		X			X						X				
<i>Polygonum hydropiper</i>	marshpepper		X	X		X		X			X					
<i>Polygonum hydropiperoides</i>	waterpepper			X							X					
<i>Polygonum persicaria</i>	lady's thumb		X	X		X					X					
<i>Polygonum punctatum</i>				X						X						

Appendix Table C-1. List of Plant Species Observed Within the Giacomini Wetland Restoration Study Area. Initials in table columns refer to areas observed within Study Area: key is provided at back of table.

Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Rhamnaceae																
<i>Ceanothus thyrsiflorus</i>	blue blossom							X					X			
<i>Rhamnus californica</i> ssp. <i>californica</i>	California coffeeberry			X		X		X		X						
Rosaceae																
<i>Cotoneaster franchetti</i>						X										
<i>Heteromeles arbutifolia</i>	toyon					X										
<i>Holodiscus discolor</i>	oceanspray			X						X						
<i>Malus sylvestris</i>	apple							X								
<i>Oemleria cerasiformis</i>	oso berry					X				X						
<i>Physocarpus capitatus</i>	ninebark							X		X						
<i>Potentilla anserina</i> ssp. <i>pacifica</i>	cinquefoil		X	X		X		X	X		X		X		X	
<i>Potentilla glandulosa</i> ssp. <i>glandulosa</i>	cinquefoil					X										
<i>Prunus</i> sp.	plum		X	X				X		X		X				
<i>Rosa californica</i>	California rose					X										X
<i>Rosa eglanteria</i>										X						
<i>Rubus discolor</i>	Himalayan blackberry		X	X		X	X	X		X		X				
<i>Rubus parviflorus</i>	thimbleberry			X				X		X						
<i>Rubus spectabilis</i>	salmonberry			X				X		X						
<i>Rubus ursinus</i>	California blackberry			X		X	X	X		X						
Rubiaceae																
<i>Galium aparine</i>	bedstraw		X	X				X		X		X				
<i>Galium trifidum</i> var. <i>pacificum</i>	bedstraw			X				X			X					

Appendix Table C-1. List of Plant Species Observed Within the Giacomini Wetland Restoration Study Area. Initials in table columns refer to areas observed within Study Area: key is provided at back of table.

Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Rubiaceae																
<i>Sherardia arvensis</i>	field madder		X									X				
Salicaceae																
<i>Populus alba</i>	poplar															
<i>Salix laevigata</i>	red willow		X	X							X					
<i>Salix lasiolepis</i>	arroyo willow		X	X		X	X	X		X	X					
<i>Salix lucida</i> ssp. <i>lasiandra</i>	shining willow		X					X		X						
Scrophulariaceae																
<i>Castilleja ambigua</i> ssp. <i>ambigua</i>	salt marsh owl's clover					X										
<i>Castilleja ambigua</i> ssp. <i>humboldtiensis</i>	Humboldt Bay owl's clover	FSC; 1B	X	X	X	X										
<i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	Point Reyes bird's-beak	FSC; 1B				X			X							
<i>Digitalis purpurea</i>	foxglove			X				X		X						
<i>Mimulus aurantiacus</i>	monkey flower					X										
<i>Mimulus guttatus</i>	monkey flower			X							X			X		
<i>Mimulus moschatus</i>	musk monkey flower			X				X			X					
<i>Scrophularia californica</i> ssp. <i>californica</i>	California figwort		X	X				X		X		X				
<i>Verbascum blattaria</i>	moth mullein			X								X				
<i>Veronica americana</i>	American brooklime		X	X				X			X			X		
<i>Veronica anagallis-aquatica</i>	water speedwell			X				X			X			X		
Solanaceae																
<i>Datura</i> sp.	jimson weed		X								X					
<i>Solanum americanum</i>	nightshade			X				X		X						

Appendix Table C-1. List of Plant Species Observed Within the Giacomini Wetland Restoration Study Area. Initials in table columns refer to areas observed within Study Area: key is provided at back of table.

Scientific Name	Common Name	Status	Giacomini		SLC Land	TBT	CPK /LR	OM/ BVC	SM/ DSM	Rip	FWM	Rud	DP	WP	SMP	NG
			East	West												
Taxodiaceae																
<i>Sequoia sempervirens</i> - cultivar	redwood – possible cultivar											X				
Typhaceae																
<i>Sparganium erectum</i> ssp. <i>stoloniferum</i>	bur-reed		X	X				X			X					
<i>Sparganium eurycarpum</i> ssp. <i>eurycarpum</i>	bur-reed							X			X					
<i>Typha angustifolia</i>	narrow-leaved cattail		X	X				X			X					
<i>Typha latifolia</i>	broad-leaved cattail			X		X	X	X			X					
Urticaceae																
<i>Urtica dioica</i>	stinging nettle		X	X			X	X		X						
<i>Urtica urens</i>	dwarf nettle		X					X		X						
Verbenaceae																
<i>Phyla nodiflora</i> var. <i>nodiflora</i>			X									X				

Key:

Giacomini East – East Pasture

Giacomini West – West Pasture

SLC Land – Undiked marshland and open water owned by State Lands Commission

TBT – Tomales Bay Trail

CPK/LR – Lands near White House Pool and Green Bridge leased by County of Marin Parks and Open Space District

OM/BVC – Olema Marsh/Bear Valley Creek

SM/DSM – Undiked Salt Marsh

R – Riparian

FW – Freshwater Marsh

Rud – Ruderal

DP/G – Dry Pasture and Grassland

WP/G – Wet Pasture and Grassland

SMP – Salt Marsh Pasture

NG – Native Grassland

**Appendix D. Datasheets from Wetland Delineation Sampling Points
in Giacomini Wetland Restoration Project Delineation Study Area**

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/19/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Very southern end of West Pasture in riparian habitat	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID:
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 1A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW			
2. <i>Oenanthе sarmentosa</i>	Herb	OBL			
3. <i>Rumex sp.</i>	Herb				
4. _____	_____	_____			
5. _____	_____	_____			
6. _____	_____	_____			
7. _____	_____	_____			
8. _____	_____	_____			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. No direct observation of saturation or inundation was observed. There had been some rainfall (2.03 inches) in two weeks prior to sampling, but it was early enough in the rainy season that it would not be expected to produce hydric conditions. The presence of sediment deposits and faint, but common oxidized pore channels attests to the fact that the soil is probably frequently saturated/inundated from creek flood flows and then subsequently drains. The point is located on a floodplain terrace adjacent to Lagunitas Creek. Area may also receive some seep flow from adjacent Inverness Ridge.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 15 – 30 % Slopes		Drainage Class:	
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>	
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-2	A	10YR 3/1.5			Sandy loam
2-12	A/B	10YR 3/2		No mottles	Sandy loam – coarse gravel
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion does NOT appear to be met. No mottling was present in soils with a chroma of 2, however, soils are coarse gravels and sandy loams, which may minimize potential for development of mottling.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Sampling point is located on a shallow floodplain terrace adjacent to Lagunitas Creek. The site is probably easily flooded during moderate to large storm events by overflow from headwaters flooding, and when floodwaters recede, water table levels remain within the top 12 inches of the soil surface for at least 14-18 days. The site is probably also influenced by seep action from the Inverness Ridge. While the hydric soil criterion did not appear to be met, the potential for mottling may be minimized by the coarse alluvial and sand nature of the soils present.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/19/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Very southern end of West Pasture near levee	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 1B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Dactylis glomerata</i>	Herb	FACU	_____	_____	_____
2. <i>Brassica nigra</i>	Herb	NL	_____	_____	_____
3. <i>Agrostis stolonifera</i>	Herb	FAC+, FACW	_____	_____	_____
4. <i>Conium maculatum</i>	_____	FAC	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 50% _____

Remarks: Vegetative criterion is NOT met. Dominant vegetation is not greater than 50% hydrophytic. Other species present include *Bromus hordeaceus* (UPL), *Hypochaeris radicata* (NL), *Mentha pulegium* (OBL), *Rumex pulcher* (FAC-), *Hemizonia congesta* (NL), etc.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. No direct observation of saturation or inundation was observed, although it was fall prior to most of the rainy season: there had been 2.03 inches of rainfall in the prior two weeks. Oxidized pore channels were few, although distinct. This area is located on the levee, and most waters may run off of the levees into adjacent pastures or floodplain.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 15 – 30 % Slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes	No	✓
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR 3/2		Very few/distinct	Sandy loam
4-12	A/B	10YR 3/2		No mottles	Sandy loam
Hydric Soil Indicators:					
_____ Histosol		_____ Concretions			
_____ Histic Epipedon		_____ High Organic Content in Surface Layer in Sandy Soils			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils List			
_____ Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. While mottling was present, there were very few mottles, suggesting that the soils are not hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? _____ Yes ✓ No Wetland Hydrology Present? _____ Yes ✓ No Hydric Soils Present? _____ Yes ✓ No	Is this Point Within a Corps Wetland? Yes ✓ No Is this Point Within a CCC Wetland? Yes ✓ No Is this Point Within a NPS Wetland? _____ Yes ✓ No
Remarks: Sampling point is located on a levee adjacent to Lagunitas Creek. Any precipitation or run-off probably flows into adjacent pastures or floodplain.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/19/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Very southern end of West Pasture near levee	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 1C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Raphanus sativus</i>	Herb	NL	_____	_____	_____
2. <i>Cirsium vulgare</i>	Herb	FAC	_____	_____	_____
3. <i>Trifolium repens</i>	Herb	FAC	_____	_____	_____
4. <i>Hypochaeris radicata</i>	Herb	NL	_____	_____	_____
5. <i>Lolium sp.</i>	Herb	FAC	_____	_____	_____
6. <i>Bromus sp.</i>	Herb	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 60%

Remarks: Vegetative criterion is met. Dominant plant species are greater than 50% hydrophytic. However, the plants present are marginal hydrophytic species.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. No direct observation of saturation or inundation was observed, but it was the fall prior to most of the rainy season. There was 2.03 inches of rainfall in the two weeks prior to sampling. Oxidized pore channels were common and distinct in the upper 2- to 3 inches, but there were no other secondary indicators. This area is located in a higher elevation portion of the pasture, and any waters probably drain off. Primary hydrologic sources included precipitation and surface run-off from adjacent uplands.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 15 – 30 % Slopes		Drainage Class:	
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?	
				Yes	No <input checked="" type="checkbox"/>
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/3		No mottles	Fine sandy loam
					Gravel in lower layers
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol			<input type="checkbox"/> Concretions		
<input type="checkbox"/> Histic Epipedon			<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils		
<input type="checkbox"/> Sulfidic Odor			<input type="checkbox"/> Organic Streaking in Sandy Soils		
<input type="checkbox"/> Aquic Moisture Regime			<input type="checkbox"/> Listed on Local Hydric Soils List		
<input type="checkbox"/> Reducing Conditions			<input type="checkbox"/> Listed on National Hydric Soils List		
<input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Hydric soil criterion is NOT met. Soil is not low chroma (3), so soils are not hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located in a higher elevation portion of the West Pasture of the Giacomini Ranch. Any precipitation or run-off probably flows into lower portions of the pasture.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/25/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Southern end of West Pasture near SFD	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 2A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Aesculus californicus</i>	Tree	NL	_____	_____	_____
2. <i>Rubus discolor</i>	Shrub	FACW	_____	_____	_____
3. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
4. <i>Oenanthе sarmentosa</i>	Herb	OBL	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 75%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. No direct observation of saturation or inundation was observed in the fall prior to most of the rainy season. There was 1.49 inches of rainfall in the two weeks prior to sampling, but it was early enough in the season that it would not be expected to create hydric conditions. Sediment deposits as evidenced by matted vegetation and signs of prolonged ponding (watermarked detritus) were observed. Also, there were distinct and common oxidized pore channels. This sampling point occurs at the base of the Inverness Ridge, where it appears that groundwater seeps under Sir Francis Drake Blvd into the West Pasture and creates favorable conditions for a fringe of riparian vegetation.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Inverness Loam, 15 – 30 % Slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2		Prominent/Abundant	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Mottling was abundant in soils with low chroma (2), suggesting that the soils are hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located in riparian area adjacent to Sir Francis Drake Boulevard at the base of the Inverness Ridge, where it appears that groundwater seeps under Sir Francis Drake Blvd into the West Pasture and creates favorable conditions for a fringe of riparian vegetation.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/25/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Southern end of West Pasture near SFD	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID:
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 2C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Vinca major</i>	Herb	NL			
2. <i>Rubus discolor</i>	Shrub	FACW			
3.					
4.					
5.					
6.					
7.					
8.					

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 50%

Remarks: Vegetative criterion is NOT met. Dominant vegetation is NOT greater than 50% hydrophytic. Other species present include *Aesculus californicus* (NL), *Cynosurus echinatus* (NL), *Carduus pycnocephalus* (NL), and *Geranium* sp.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream, Lake or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. Sampling was conducted in the fall prior to most of the rainy season, although there had been 1.49 inches of rainfall in the two weeks prior to sampling. There were no primary or secondary indicators. This sampling point is located on the road berm and, therefore, any run-off probably drains rapidly, and the seep flow is well below the ground surface.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 15 – 30 % Slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2		No mottles	Uniform: lots of gravel and sand
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. No mottles were present in the low chroma (2) soil, suggesting that the soils are NOT hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
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Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located in riparian area adjacent to Sir Francis Drake Boulevard on the road berm. Therefore, any run-off probably drains rapidly, and the seep flow is well below the ground surface.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/19/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Southern end of West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 3A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Glyceria occidentalis</i>	Herb	OBL	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other plant species present include *Juncus balticus* (OBL), *Rumex* sp., *Mentha pulegium* (OBL), and *Agrostis stolonifera* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion appears to be met. No direct observation of saturation or inundation was observed in the fall prior to most of the rainy season. While there had been 2.03 inches rainfall in the two weeks prior to sampling, it was early enough in the rainy season that this would not be expected to produce hydric conditions. Only one secondary indicator was observed: there were prominent, abundant oxidized pore channels. While the presence of only one secondary indicator would suggest that the hydrologic criterion was not met, the fact that this area is probably saturated from groundwater/seep flows from the Inverness Ridge rather than flooded with surface flows that would create some of the other indicators suggests that this area does probably have wetland hydrology.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Novato Clay</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No _____			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-4	A				Organic sandy material
4-12+	A/B	10YR 3/2		Prominent/Abundant	Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol			<input type="checkbox"/> Concretions		
<input type="checkbox"/> Histic Epipedon			<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils		
<input type="checkbox"/> Sulfidic Odor			<input type="checkbox"/> Organic Streaking in Sandy Soils		
<input type="checkbox"/> Aquic Moisture Regime			<input type="checkbox"/> Listed on Local Hydric Soils List		
<input type="checkbox"/> Reducing Conditions			<input type="checkbox"/> Listed on National Hydric Soils List		
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Hydric soil criterion is met. Mottling was abundant in soils with low chroma (2), suggesting that the soils are hydric.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located in pasture area adjacent to Sir Francis Drake Boulevard at the base of the Inverness Ridge, where it appears that groundwater seeps under Sir Francis Drake Blvd into the West Pasture and creates favorable conditions for wetlands.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/19/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Southern end of West Pasture near levee	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 3B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
3. <i>Oenanthе sarmentosa</i>	Herb	OBL	_____	_____	_____
4. <i>Mentha pulegium</i>	Herb	OBL	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 100% _____

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other species present include *Rumex conglomeratus* (FACW), *Solanum americanum* (FAC), *Rorippa palustris* (OBL), and *Chenopodium ambrosioides* (FAC).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion appears to be met. No direct observation of saturation or inundation was observed in the fall prior to most of the rainy season. While there had been 2.03 inches rainfall in the two weeks prior to sampling, it was early enough in the rainy season that this would not be expected to produce hydric conditions. Only one secondary indicator was observed: there were prominent, abundant oxidized pore channels. While the presence of only one secondary indicator would suggest that the hydrologic criterion was not met, the fact that this area is probably saturated from groundwater/seep flows from the Inverness Ridge rather than flooded with surface flows that would create some of the other indicators suggests that this area does probably have wetland hydrology.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 50 - 75 % Slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>	
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2		Abundant/Prominent	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Hydric soil criterion is met. Mottling was abundant in soils with low chroma (2), suggesting that the soils are hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td style="width: 50%;">Hydrophytic Vegetation Present?</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 20%;">Yes</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/></td> <td style="width: 10%;">No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Yes</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Yes</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Wetland Hydrology Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Hydric Soils Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	<table style="width: 100%;"> <tr> <td style="width: 50%;">Is this Point Within a Corps Wetland?</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 20%;">Yes</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/></td> <td style="width: 10%;">No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Yes</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Yes</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No																											
Wetland Hydrology Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No																											
Hydric Soils Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No																											
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No																											
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No																											
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No																											
Remarks: Sampling point is located in riparian area adjacent to Sir Francis Drake Boulevard at the base of the Inverness Ridge, where it appears that groundwater seeps under Sir Francis Drake Blvd into the West Pasture and creates favorable conditions for a fringe of riparian vegetation.																															

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/19/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Southern end of West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID:
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 3C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium</i> sp.	Herb	FAC			
2. <i>Dactylis glomerata</i>	Herb	FACU			
3. <i>Holcus lanatus</i>	Herb	FACW			
4.					
5.					
6.					
7.					
8.					

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 66%

Remarks: Vegetative criterion is met. Dominant plant species are greater than 50% hydrophytic. However, the plants present are marginal hydrophytic species. Also, other plant species include *Raphanus sativus* (NL), *Trifolium fragiferum* (FACW-), *Trifolium repens* (FAC), *Lotus corniculatus* (FAC).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p><input type="checkbox"/> Stream, Lake or Tide Gauge</p> <p><input type="checkbox"/> Aerial Photographs</p> <p><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. No direct observation of saturation or inundation was observed in the fall prior to most of the rainy season. While there had been 2.03 inches rainfall in the two weeks prior to sampling, it was early enough in the rainy season that this would not be expected to produce hydric conditions. Oxidized pore channels were few and faint, and there were no other secondary indicators. This area is located in a higher elevation portion of the pasture, and any waters from precipitation or surface run-off probably drain off to lower areas.</p>	

SOILS

Map Unit Name (Series and Phase): <u>Novato Clay</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No _____			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12+	A/B	10YR 3/2		No mottles	Silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Gleyed or Low-Chroma Colors
<input type="checkbox"/> Concretions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Listed on Local Hydric Soils List	<input type="checkbox"/> Listed on National Hydric Soils List	<input type="checkbox"/> Other (Explain in Remarks)
Remarks: Hydric soil criterion is NOT met. No mottles were present in the low chroma (2) soil, suggesting that the soils are NOT hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Sampling point is located in a higher elevation portion of the West Pasture of the Giacomini Ranch. Any precipitation or run-off probably flows into lower portions of the pasture.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/25/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Southern end of West Pasture near diverted drainage	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 4

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium multiflorum</i>	Herb	FAC	_____	_____	_____
2. <i>Trifolium fragiferum</i>	Herb	FACW-	_____	_____	_____
3. <i>Geranium molle</i>	Herb	NL	_____	_____	_____
4. <i>Cirsium vulgare</i>	Herb	FAC	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 75%

Remarks: Vegetative criterion is met. Dominant plant species are greater than 50% hydrophytic. However, the plants present are marginal hydrophytic species. Also, other plant species include *Bromus hordeaceus* (FACU-), *Lolium perenne* (FAC).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. No direct observation of saturation or inundation was observed in the fall prior to most of the rainy season. While there had been 1.49 inches rainfall in the two weeks prior to sampling, it was early enough in the rainy season that this would not be expected to produce hydric conditions. There were no secondary indicators. Area appears to be fill from maintenance of ditch and higher than surrounding pasture.</p>	

SOILS

Map Unit Name (Series and Phase): <u>Novato Clay</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12+	A/B	10YR 3/2		No mottles	Sandy loam fill with chunks of granite
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Gleyed or Low-Chroma Colors
<input type="checkbox"/> Concretions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Listed on Local Hydric Soils List	<input type="checkbox"/> Listed on National Hydric Soils List	<input type="checkbox"/> Other (Explain in Remarks)
Remarks: Hydric soil criterion is NOT met. No mottles were present in the low chroma (2) soil, suggesting that the soils are NOT hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Sampling point is located in a higher elevation portion of the West Pasture of the Giacomini Ranch. Area appears to be fill from maintenance of ditch and higher than surrounding pasture.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/20/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Southern end of West Pasture near SFD	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 5

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
3. <i>Juncus balticus</i>	Herb	OBL	_____	_____	_____
4. <i>Holcus lanatus</i>	Herb	FACW	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant plant species are greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ 12 _____ (in.)</p>	

Remarks: Hydrologic criterion does NOT appear to be met. Saturation was 12 inches below the soil surface only 3 days after the last rainfall, and there had been no significant break in precipitation prior to sampling (4.04 inches in prior two 18 days). Oxidized pore channels were distinct and abundant in some horizons, but there were no other secondary indicators. The fact that saturation was well below the soil surface only 7 days after the last rainfall and that there had been no significant break in precipitation suggests that this area does not have wetland hydrology.

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 50 to 75 % Slopes		Drainage Class:	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12+	A/B	10YR 2/1		No mottles	Sandy loam with fill
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion does NOT appear to be met. Soils were low chroma (1), suggesting that the soils are hydric. However, the lack of wetland hydrology and the fact that the soils appear to be fill from the road construction suggests otherwise. Therefore, soils are NOT hydric.</p>					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: Sampling point is located along Sir Francis Drake Boulevard adjacent to the road berm, and soils suggest that this area is fill from road construction. While adjacent riparian areas were actually saturated to the surface, the water table here was actually 12 inches below the soil surface only 7 days since the last significant rainfall. Any precipitation or run-off probably flows into lower portions of the pasture, and the groundwater table appears to be well below the soil surface.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/25/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Southern end of West Pasture near SFD	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 6

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Trifolium fragiferum</i>	Herb	FACW-	_____	_____	_____
2. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
3. <i>Scirpus pungens</i>	Herb	OBL	_____	_____	_____
4. <i>Juncus phaeocephalus</i>	Herb	FACW	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other plant species present include *Cyperus eragrostis* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Saturation was observed in the top 12 inches in the fall prior to most of the rainy season. While there had been 1.49 inches rainfall in the two weeks prior to sampling, it was early enough in the rainy season that this would not be expected to produce hydric conditions. It was actually more saturated in upper 6 inches than lower 6 inches. Oxidized pore channels were prominent and abundant.</p>	

SOILS

Map Unit Name (Series and Phase): <u>Novato Clay</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-8	A	10YR 3/2			Fine sandy loam
8-12+	B	10YR 3/1		Prominent/Abundant	Coarse sandy clay
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions				
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils				
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils				
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List				
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List				
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)				
Remarks: Hydric soil criterion is met. Mottling was abundant in soils with low chroma (2 and 1), suggesting that the soils are hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Sampling point is located in pasture area adjacent to Sir Francis Drake Boulevard at the base of the Inverness Ridge, where it appears that groundwater seeps under Sir Francis Drake Blvd into the West Pasture and creates favorable conditions for wetlands. This area was saturated even during the fall when there had been no or very little rainfall.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/20/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Southern end of West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 7

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Trifolium fragiferum</i>	Herb	FACW-	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FAC	_____	_____	_____
3. <i>Lolium sp.</i>	Herb	FAC	_____	_____	_____
4. <i>Rumex sp.</i>	Herb	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 12 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 5 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Soils were saturated in the upper 12 inches 3 days after the last significant rainfall. There had been 4.03 inches of rainfall in the last 14 to 18 days. Based on the water table level, it was assumed that the soils would remain saturated for at least 14 to 18 days without rainfall. There were also prominent and abundant oxidized pore channels.</p>	

SOILS

Map Unit Name (Series and Phase): <u>Novato Clay</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No _____			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12+	A/B	10YR 3/2		Common/Faint	Sandy loam with pockets of sand (fill?)
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Mottling was present in soils with low chroma (2), suggesting that the soils are hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Wetland Hydrology Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Hydric Soils Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No
Remarks: Sampling point is located in pasture area adjacent to Sir Francis Drake Boulevard at the base of the Inverness Ridge, where it appears that groundwater seeps under Sir Francis Drake Blvd into the West Pasture and creates favorable conditions for wetlands.									

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/20/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Southern end of West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 8

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Trifolium fragiferum</i>	Herb	FACW-			
2. <i>Lolium</i> sp.	Herb	FAC			
3. <i>Rumex</i> sp.	Herb				
4. _____	_____	_____			
5. _____	_____	_____			
6. _____	_____	_____			
7. _____	_____	_____			
8. _____	_____	_____			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 15 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 7 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Soils were saturated in the upper 12 inches 3 days after the last significant rainfall. There had been 4.03 inches of rainfall in the last 14 to 18 days. Based on the water table level, it was assumed that the soils would remain saturated for at least 14 to 18 days without rainfall. There were also distinct and abundant oxidized pore channels. Primary hydrologic sources are surface run-off, precipitation, and groundwater.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Novato Clay</u>			Drainage Class: _____		
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No _____		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12+	A/B	10YR 3/2		Few/Faint	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Mottling was present in soils with low chroma (2), suggesting that the soils are hydric.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located in pasture area adjacent to Sir Francis Drake Boulevard at the base of the Inverness Ridge, where it appears that groundwater seeps under Sir Francis Drake Blvd into the West Pasture and creates favorable conditions for wetlands.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/19/03, 2/20/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons, Leslie Allen, and Kristen Ward	State: CA
Site Location: Southern end of West Pasture near levee	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 9A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Trifolium fragiferum</i>	Herb	FACW-	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FAC	_____	_____	_____
3. <i>Lolium perenne</i>	Herb	FAC	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other species present include *Rumex* sp. and *Plantago major* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ 2 on 2/20/04 (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Area was inundated 3 days after last significant rainfall. There had been 4.03 inches of rainfall in the prior 14 to 18 days. Secondary indicator was also observed: there were faint, but common oxidized pore channels. Primary hydrologic sources are groundwater, surface run-off, and precipitation.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Novato Clay</u>			Drainage Class: _____		
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12+	A/B	10YR 3/2		Common/Faint	Fine sandy loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Mottling was present in soils with low chroma (2), suggesting that the soils are hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Sampling point is located in a depressional area or basin in the West Pasture adjacent to Lagunitas Creek. Hydrology appears to be primarily a precipitation-driven seasonally high ground water table.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 11/19/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Southern end of West Pasture near levee	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 9B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Hordeum murinum</i>	Herb	NI	_____	_____	_____
2. <i>Raphanus sativus</i>	Herb	NL	_____	_____	_____
3. <i>Lolium perenne</i>	Herb	FAC	_____	_____	_____
4. <i>Cirsium vulgare</i>	Herb	FACU	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 25%

Remarks: Vegetative criterion is NOT met. Dominant plant species is less than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. No direct observation of saturation or inundation was observed in the fall prior to most of the rainy season. While there had been 2.03 inches rainfall in the two weeks prior to sampling, it was early enough in the rainy season that this would not be expected to produce hydric conditions. There were no oxidized pore channels or other primary or secondary indicators. This area is located in a higher elevation portion of the pasture, and any precipitation or surface runoff waters probably drain off to lower areas.</p>	

SOILS

Map Unit Name (Series and Phase): <u>Novato Clay</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12+	A/B	10YR 3/2		No mottles	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. No mottles were present in the low chroma (2) soil, suggesting that the soils are NOT hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland? Yes <input checked="" type="checkbox"/> No
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Sampling point is located in a higher elevation portion of the West Pasture of the Giacomini Ranch. Any precipitation or run-off probably flows into lower portions of the pasture.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/20/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly south of Gradjanski Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 10A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Holcus lanatus</i>	Herb	FACW	_____	_____	_____
2. <i>Mentha pulegium</i>	Herb	OBL	_____	_____	_____
3. <i>Rumex</i> sp.	Herb	_____	_____	_____	_____
4. <i>Trifolium repens</i>	Herb	FAC	_____	_____	_____
5. <i>Trifolium fragiferum</i>	Herb	FACW-	_____	_____	_____
6. <i>Geranium carolinanum</i>	Herb	NL	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = **80%**

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 5 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 2 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Soils were saturated in the upper 12 inches 3 days after the last significant rainfall. There had been 4.03 inches of rainfall in the prior 14 to 18 days. Based on the water table level, it was assumed that the soils would remain saturated for at least 14 to 18 days without rainfall. There were also distinct and abundant oxidized pore channels. Source of hydrology appears to be seep flow and possibly a small drainage from the Inverness Ridge.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 50 to 75 % Slopes		Drainage Class:	
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?	
				Yes	No <input checked="" type="checkbox"/>
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2		No mottles	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Hydric soil criterion is met. Although no mottles were present in soils with chroma of (2), wetland hydrology was definitely present, so soils are hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Sampling point is located in a disturbed pasture area adjacent to Sir Francis Drake Boulevard at the base of the Inverness Ridge, where it appears that groundwater seeps under Sir Francis Drake Blvd into the West Pasture and creates favorable conditions for wetlands. There may also be a small drainage that flows through this area.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/20/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly south of Gradjanski Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 10B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Hordeum (probably murinum).</i>	Herb	NI	_____	_____	_____
2. <i>Plantago lanceolata</i>	Herb	FAC-	_____	_____	_____
3. <i>Rumex pulcher</i>	Herb	FAC+	_____	_____	_____
4. <i>Geranium carolinanum</i>	Herb	NL	_____	_____	_____
5. <i>Vicia sativa ssp. sativa</i>	Herb	FACU	_____	_____	_____
6. <i>Hemizonia congesta</i>	Herb	NL	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 17%

Remarks: Vegetative criterion is NOT met. Dominant vegetation is less than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. No direct observation of saturation or inundation was observed during the rainy season, less than 3 days since the last significant rainfall. There had been 4.03 inches of rainfall in the prior 14 to 18 days. Oxidized pore channels were few and faint, and there were no other secondary indicators. This area is located in a higher elevation portion of the pasture, and any precipitation or surface runoff waters probably drain off to lower areas.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Inverness Loam, 50 to 75% Slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5+	A/B	10YR 3/3		No mottles	Fill composite
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. The soil did not have low chroma (3) , suggesting that the soils are NOT hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No Is this Point Within a CCC Wetland? Yes <input checked="" type="checkbox"/> No Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Sampling point is located in a higher elevation portion of the West Pasture of the Giacomini Ranch created by historic fill activities. Any precipitation or run-off probably flows into lower portions of the pasture.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/20/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly south of Gradjanski Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 11

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
2. <i>Plantago major</i>	Herb	FACW-	_____	_____	_____
3. <i>Rumex pulcher</i>	Herb	FAC+	_____	_____	_____
4. <i>Trifolium fragiferum</i>	Herb	NI	_____	_____	_____
5. <i>Poa annua</i>	Herb	FACW	_____	_____	_____
6. <i>Mentha pulegium</i>	Herb	OBL	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = **67%**

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic, but the plant species are somewhat marginal wetland ones. Other plant species present include: *Cirsium vulgare* (FACU).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. No direct observation of saturation or inundation was observed during the rainy season, less than 3 days since the last significant rainfall. There had been 4.03 inches of rainfall in the prior 14 to 18 days. Oxidized pore channels were few and faint, and there were no other secondary indicators. This area is located in a higher elevation portion of the pasture, and any precipitation or surface runoff waters probably drain off to lower areas.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Inverness Loam, 50 to 75% Slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-15	A/B	10YR 3/3		No mottles	Fill composite
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. The soil did not have low chroma (3), suggesting that the soils are NOT hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Sampling point is located on a mound adjacent to a drainage ditch that was apparently created by historic fill activities. Any precipitation or run-off probably flows into lower portions of the pasture.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/3/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly east of Gradjanski Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 12A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium</i>	Herb	FAC	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
3. <i>Juncus patens</i>	Herb	FAC	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = **66%**

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other plant species present include *Mentha pulegium* (OBL), *Rumex* sp.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ 5 _____ (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Remarks: Hydrologic criterion is met. Saturation was observed in the rainy season (6.41 inches in the prior 14 to 18 days), and depth to saturation suggests that it would persist at least 14 to 18 days after the last rainfall. In addition, prominent, abundant oxidized pore channels were observed. Sampling point is located on alluvial floodplain adjacent to Fish Hatchery Creek and another small drainage ditch. Area probably receives flood overflows, as well as elevated water table during winter.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Inverness Loam, 50 to 75 % Slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/1		Common/Prominent	Loamy clay interbedded with alluvium
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Mottling was abundant in soils with low chroma (1), suggesting that the soils are hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located on alluvial floodplain adjacent to Fish Hatchery Creek and another small drainage ditch. Area probably receives flood overflows, as well as elevated water table during winter.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/3/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly east of Gradjanski Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 12C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium</i>	Herb	FAC			
2. <i>Trifolium repens</i>	Herb	FACU+			
3. _____	_____	_____			
4. _____	_____	_____			
5. _____	_____	_____			
6. _____	_____	_____			
7. _____	_____	_____			
8. _____	_____	_____			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 50%

Remarks: Vegetative criterion is NOT met. Dominant vegetation is less than 50% hydrophytic. Subdominant plant species present include *Rumex* sp. and *Stellaria media* (FACU). Other plant species were: *Poa trivialis* (FACW), *Taraxacum officinale* (FACU), *Brassica nigra* (NL), *Ranunculus muricatus* (FACW+), *Lotus corniculatus* (FAC), *Foeniculum vulgare* (FACU), *Silybum marianum* (NL), and *Poa annua* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 13 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 10 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion does NOT appear to be met. Saturation was observed in the rainy season (6.41 inches in the prior 14 to 18 days) in the top 12 inches, but it was only 6 days since the last rainfall. Based on the depth to saturation, it is estimated that the saturation/water table would exceed 12 to 18 inches after 14- to 18 days with no rainfall. Oxidized pore channels were observed, but they were rather faint. Sampling point is located in a fill mound on the alluvial floodplain adjacent to Fish Hatchery Creek and another small drainage ditch. Area probably receives flood overflows, but the topography encourages quick drainage.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 50 to 75 % Slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2		Faint	Alluvium with some clay pockets
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. Mottling was only faint in soils with low chroma (2), suggesting that the soils are probably NOT hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located in a fill mound on the alluvial floodplain adjacent to Fish Hatchery Creek and another small drainage ditch. Area probably receives flood overflows, but the topography encourages quick drainage.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/3/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly north of Gradjanski Residence in West Pasture near spoil pile	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 13A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium</i> sp.	Herb	FAC	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
3. <i>Mentha pulegium</i>	Herb	OBL	_____	_____	_____
4. <i>Rumex</i> sp.	Herb	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = **66%**

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other plant species present include *Stellaria media* (FACU), *Ranunculus muricatus* (FACW+), *Plantago major* (FACW), *Foeniculum vulgare* (FACU), and *Cyperus eragrostis* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ 0 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Saturation was observed in the rainy season (6.41 inches in the prior 14 to 18 days), and depth to saturation suggests that it would persist at least 14 to 18 days after the last rainfall. Sampling point is located on floodplain adjacent to Inverness Ridge. It appears that groundwater seeps from the base of the Ridge and both sheetflows and percolates through the soil across this sloped pasture toward Fish Hatchery Creek. Water table remains elevated for a long time during the winter and spring.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Novato Clay</u>			Drainage Class: _____		
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2			Loam intermixed with alluvium
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion does NOT appear to be met. There were no mottles in the low chroma (2) soils, but the potential for mottles may be minimized by the alluvial nature of the soils present.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Remarks: Sampling point is located on floodplain adjacent to Inverness Ridge. It appears that groundwater seeps from the base of the Ridge and both sheetflows and percolates through the soil across this sloped pasture toward Fish Hatchery Creek. Water table remains elevated for a long time during the winter and spring. While the hydric soil criterion did not appear to be met, it is possible that the alluvial nature of the soils present may minimize the potential for development of mottling.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/3/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly north of Gradjanski Residence in West Pasture near spoil pile	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 13B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium</i> sp.	Herb	FAC	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = **66%**

Remarks: Vegetative criterion is NOT met. Dominant vegetation is less than 50% hydrophytic. Other plant species present include *Rumex* sp.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 12 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 9 _____ (in.)</p>	
<p>Remarks: Hydrologic soil criterion does NOT appear to be met. Saturation was observed in the rainy season in the top 12 inches, but it was only 6 days since the last rainfall, and there had been 6.41 inches of rainfall in the prior 14 to 18 days. Based on the depth to saturation, it is estimated that the depth to saturation/water table would exceed 12 to 18 inches after 14- to 18 days with no rainfall. Oxidized pore channels were observed, but they were faint and few. Sampling point is located in a fill area on the alluvial floodplain adjacent to Fish Hatchery Creek. Area probably receives flood overflows, but the topography encourages quick drainage.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Clay Loam, 50 to 75 % Slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2		None	Loam intermixed with alluvium
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. There were no mottles in the low chroma (2) soils and no wetland hydrology, which suggests that soils are NOT hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located in a fill area on the alluvial floodplain adjacent to Fish Hatchery Creek. Area probably receives flood overflows, but the topography encourages quick drainage.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/3/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly north of Gradjanski Residence in West Pasture near spoil pile	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 13C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium</i>	Herb	FAC	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
3. <i>Poa annua</i>	Herb	FACW	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = **66%**

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other plant species present include *Lotus corniculatus* (FAC).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 12 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 11 _____ (in.)</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Remarks: Hydrologic criterion does NOT appear to be met. Saturation was observed in the rainy season in the top 12 inches, but it was only 6 days since the last rainfall, and there had been 6.41 inches in the prior 14 to 18 days. Based on the depth to saturation, it is estimated that the depth to saturation/water table would exceed 12 to 18 inches after 14- to 18 days with no rainfall. Oxidized pore channels were NOT observed, not even faint ones. Sampling point is located in a fill area used as road and dumping spot on the alluvial floodplain adjacent to Fish Hatchery Creek. Area probably receives flood overflows, but the topography encourages quick drainage.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Clay Loam, 50 to 75 % Slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2		None	Loam intermixed with alluvium
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. There were no mottles in the low chroma (2) soils and no wetland hydrology, which suggests that soils are NOT hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located in a fill area used as a road and dumping spot on the alluvial floodplain adjacent to Fish Hatchery Creek. Area probably receives flood overflows, but the topography encourages quick drainage.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/3/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly north of Gradjanski Residence in West Pasture along SFD	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 14

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium</i>	Herb	FAC	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
3. <i>Hypochaeris radicata</i>	Herb	NL	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 33%

Remarks: Vegetative criterion is NOT met. Dominant vegetation is less than 50% hydrophytic. Other plant species present include *Geranium carolinanum* (FACU), *Rumex pulcher* (FAC+), *Taraxacum officinale* (FACU), and *Mentha pulegium* (OBL).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: 12 _____ (in.)</p> <p>Depth to Saturated Soil: 9 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion would NOT appear to be met. Saturation was observed in the rainy season in the top 12 inches, but it was only 6 days since the last rainfall, and there had been 6.41 inches in the prior 14 to 18 days. Based on the depth to saturation, it is estimated that the depth to saturation/water table would exceed 12 to 18 inches after 14- to 18 days with no rainfall. Oxidized pore channels were NOT observed, not even faint ones. Sampling point is located on floodplain adjacent to Inverness Ridge and adjacent to Sir Francis Drake Road. In adjacent areas, it appears that groundwater seeps from the base of the Ridge and both sheetflows and percolates through the soil across this sloped pasture toward Fish Hatchery Creek. This seep flow helps sustain some riparian habitat right on the edge of Sir Francis Drake. However, at this point, there is a break in the riparian habitat that does not appear disturbance-related and may correlate with some discontinuities in the seep flow patterns.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 50 to 75 % Slopes		Drainage Class:	
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>	
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2		Common/Distinct	Loam intermixed with alluvium/Fill
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion does NOT appear to be met. While soils would appear to be hydric due to the presence of mottles in low chroma (2) soils, the fact that the soils are fill and that wetland hydrology does not appear to be present suggests that these mottles may be artifact of road and other fill activities.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No Is this Point Within a CCC Wetland? Yes <input checked="" type="checkbox"/> No Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Sampling point is located on floodplain adjacent to Inverness Ridge and adjacent to Sir Francis Drake Road. In adjacent areas, it appears that groundwater seeps from the base of the Ridge and both sheetflows and percolates through the soil across this sloped pasture toward Fish Hatchery Creek. This seep flow helps sustain some riparian habitat right on the edge of Sir Francis Drake. However, at this point, there is a break in the riparian habitat that does not appear disturbance-related and may correlate with some discontinuities in the seep flow patterns.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 6/2/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons	State: CA
Site Location: Near Lucchesi Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 15

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium multiflorum</i>	Herb	FAC	_____	_____	_____
2. <i>Hordeum marinum</i>	Herb	FAC	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Subdominant plant species is *Vulpia bromoides* (FACW). Other plant species present include *Juncus bufonius* (FACU), *Ranunculus muricatus* (FACW+), *Glyceria occidentalis* (OBL), *Rumex pulcher* (FAC+), *Lotus corniculatus* (FAC), *Hemizonia congesta* (NL), *Poa annua* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion would appear to be met. Soil was not saturated or inundated in June, but sampling was conducted long after rains had ceased. Oxidized pore channels were distinct and common in the top 2 inches. While there were no other secondary indicators, it is likely that soil tends to be saturated, rather than inundated with sheetflow, thereby decreasing the potential for most of the other primary and secondary indicators such as algal mats, sediment deposits, water-stained vegetation, etc. This area appears to be a slightly elevated mound of fill in a floodplain that primarily receives groundwater from the Inverness Ridge through sheetflow and percolation through the soil. This area appeared to be saturated during the rainy season, although no formal sampling was conducted at that time, and it is drier than some of the surrounding, unfilled pasturelands.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Novato Clay</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No _____			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2		???	Very compacted fill composite
Hydric Soil Indicators:					
_____ Histosol		_____ Concretions			
_____ Histic Epipedon		_____ High Organic Content in Surface Layer in Sandy Soils			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils List			
_____ Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion does NOT appear to be met. There were no mottles in the low chroma (2) soil, but the soils have been disturbed through fill activities, which may affect the potential for development of mottling.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes _____ No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes _____ No Hydric Soils Present? _____ Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes _____ No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes _____ No Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes _____ No
<p>Remarks: This area appears to be a slightly elevated mound of fill in a floodplain that primarily receives groundwater from the Inverness Ridge through sheetflow and percolation through the soil. This area appeared to be saturated during the rainy season, although no formal sampling was conducted at that time, and it is drier than some of the surrounding, unfilled pasturelands. While the hydric soil criterion does NOT appear to met -- there were no mottles in the low chroma (2) soil - the soils have been disturbed through fill activities, which may affect the potential for development of mottling.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/3/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly east of Lucchesi Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 16A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium multiflorum</i>	Herb	FAC	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
3. <i>Juncus balticus</i>	Herb	OBL	_____	_____	_____
4. <i>Holcus lanatus</i>	Herb	FAC	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 75%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 8 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 2 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Saturation was observed in the rainy season (6.41 inches in the prior 14 to 18 days), and depth to saturation suggests that it would persist at least 14 to 18 days after the last rainfall. However, oxidized pore channels were faint/distinct and few. Sampling point is located on floodplain adjacent to Inverness Ridge and the 1906 Drainage. The area has been probably been filled with spoil material from creek excavation historically, but flood overflow and groundwater sustains saturation long enough to create wetland hydrology.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 50 to 75 % Slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2		Common/Faint	Alluvial material
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion appears to be met. While mottles were faint, they were common and present in a soil with low chroma (2), suggesting that soils are hydric.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located on floodplain adjacent to Inverness Ridge and the 1906 Drainage. The area has been probably been filled with spoil material from creek excavation historically, but flood overflow and groundwater sustains saturation long enough to create wetland hydrology.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/3/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Kristen Ward	State: CA
Site Location: Directly east of Lucchesi Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 16C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium multiflorum</i>	Herb	FAC	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
3. <i>Taraxacum officinale</i>	Herb	FACU	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 33%

Remarks: Vegetative criterion is NOT met. Dominant vegetation is less than 50% hydrophytic. Other species present include: *Poa annua* (FACW), *Rumex acetosella* (FAC-), and *Brassica nigra* (NL).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: 8 (in.)</p> <p>Depth to Saturated Soil: 2 (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. No saturation or inundation was observed in the rainy season 6 days after the last rainfall, and there had been 6.41 inches of rainfall in the prior 14 to 18 days. There were no secondary hydrologic indicators either. Sampling point is located on floodplain adjacent to the 1906 Drainage. The area has been filled substantially with spoil material from creek excavation, and any flood overflows probably drain quickly due to the rounded topography.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Inverness Loam, 50 to 75 % Slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2			Alluvial material
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. No mottles were present in a soil with low chroma (2), therefore, suggesting that soils are NOT hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located on floodplain adjacent to the 1906 Drainage. The area has been filled substantially with spoil material from creek excavation, and any flood overflows probably drain quickly due to the rounded topography.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 4/6/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Directly east of Lucchesi Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 17A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 100% _____

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Subdominant species are: *Lotus corniculatus* (FAC), *Distichlis spicata* (FACW), and *Hordeum brachyantherum* (FACW). Other species present include: *Ranunculus muricatus* (FACW) and *Atriplex semibaccata* (FAC).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion would appear to be met. Soil was not saturated or inundated in April, and sampling was conducted 10 days after the last significant rainfall. However, there had been only 1.16 inches of rainfall in the past 30 days. Oxidized pore channels were abundant. While there were no other secondary indicators, it is likely that soil tends to be saturated from groundwater, rather than inundated with sheetflow, thereby decreasing the potential for most of the other primary and secondary indicators such as algal mats, sediment deposits, water-stained vegetation, etc. Sampling point is located on floodplain adjacent to Inverness Ridge.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Novato Clay</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No _____			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/1		Abundant/Distinct	Clay Loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. While mottles are not required to be present in a soil with a chroma of (1), they were abundant, suggesting that soils are hydric.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
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Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located on floodplain adjacent to Inverness Ridge. The area probably receives groundwater from the base of the Inverness Ridge through sheetflow and percolation through the soil, as well as perhaps some overflow from both the 1906 drainage and Fish Hatchery Creek. Groundwater table is elevated through the winter and spring.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 4/6/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Directly east of Lucchesi Residence in West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 17C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Lolium multiflorum</i>	Herb	FAC	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
3. <i>Cerastium sp.</i>	Herb	_____	_____	_____	_____
4. <i>Hordeum sp.</i>	Herb	_____	_____	_____	_____
5. <i>Geranium dissectum</i>	Herb	NL	_____	_____	_____
6. <i>Rumex pulcher</i>	Herb	FAC+	_____	_____	_____
7. <i>Vulpia bromoides</i>	Herb	FACW	_____	_____	_____
8. <i>Aira caryophyllea</i>	Herb	NL	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = **43%**

Remarks: Vegetative criterion is NOT met. Dominant vegetation is less than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. Soil was not saturated or inundated in April, and sampling was conducted only after 10 days after the last significant rainfall. However, there had been only 1.16 inches of rainfall in the past 30 days. There were possibly some oxidized pore channels, but they were not distinct, and there were no other primary or secondary indicators. Sampling point is located on floodplain adjacent to the 1906 Drainage. The area has been filled substantially with spoil material from creek excavation, and any flood overflows probably drain quickly due to the rounded topography.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Inverness Loam, 50 to 75 % Slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/3		No mottles	Sandy loam fill mix
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. Soils did not have a low chroma (3), therefore, suggesting that soils are NOT hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
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Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located on floodplain adjacent to the 1906 Drainage. The area has been filled substantially with spoil material from creek excavation, and any flood overflows probably drain quickly due to the rounded topography.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Directly east of Lucchesi Residence in north West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 18

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Poa trivialis</i>	Herb	FACW	_____	_____	_____
2. <i>Juncus phaeocephalus</i>	Herb	FACW	_____	_____	_____
3. <i>Potentilla anserina</i>	Herb	OBL	_____	_____	_____
4. <i>Lythrum hyssopifolium</i>	Herb	FACW	_____	_____	_____
5. <i>Trifolium repens</i>	Herb	FACU+	_____	_____	_____
6. <i>Cyperus eragrostis</i>	Herb	FACW	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = **83%**

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other species are: *Epilobium* sp.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion would appear to be met. Soil was saturated in March. Sampling was conducted only 10 days after the last large rainfall, and there had been 4.08 inches of rainfall in the last 14 to 18 days. However, it appeared likely that saturation would persist at least 14 to 18 days. There were several secondary indicators, including distinct, common oxidized pore channels, algal matting, and matted vegetation. Spread of creek excavation materials on west bank of 1906 drainage has created a berm effect, encouraging ponding of water in a depressional feature adjacent to the Lucchesi residence fence. Use of heavy machinery in this area for creek excavation has altered the topography in this area, creating man-induced wetlands (atypical situations) that have the potential to be seasonal wetlands (problem areas). Primary hydrologic sources appear to be precipitation and surface run-off and, perhaps during very extreme flood events, overbank flooding from the 1906 drainage.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 50 to 75 % Slopes		Drainage Class:	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/1		No mottles	Very clayey, probably Novato Clay
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Soil had a low chroma of (1), and mottles are not required, therefore, the soils are hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
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Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located in depressional feature adjacent to Lucchesi residence and fenceline on west bank of 1906 drainage. Spread of creek excavation materials on west bank of 1906 drainage has created a berm effect, encouraging ponding of water in the depressional feature. Use of heavy machinery in this area for creek excavation has altered the topography in this area, creating man-induced wetlands (atypical situations) that have the potential to be seasonal wetlands (problem areas).																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 19

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Mentha pulegium</i>	Herb	OBL	_____	_____	_____
2. <i>Rumex conglomerates</i>	Herb	FACW	_____	_____	_____
3. <i>Cyperus eragrostis</i>	Herb	FACW	_____	_____	_____
4. <i>Poa trivialis</i>	Herb	FACW	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ 0 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Soil was saturated to the surface in early March. Sampling was conducted only 10 days after the last rainfall, and there had been 4.08 inches of rainfall in the last 14 to 18 days. However, it appeared likely that saturation would persist at least 14 to 18 days. There were several secondary indicators, including algal matting and matted vegetation. Use of heavy machinery in this area for creek excavation has altered the topography in this area, creating man-induced wetlands (atypical situations) that have the potential to be seasonal wetlands (problem areas). Primary hydrologic sources appear to be precipitation and surface run-off and, perhaps during very extreme flood events, overbank flooding from the 1906 drainage.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Inverness Loam, 50 to 75 % Slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/1		No mottles	Coarse sandy loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Soil had a low chroma of (1), and mottles are not required, therefore, the soils are hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
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Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located in depressional feature in parking area adjacent to Lucchesi residence. Use of heavy machinery in this area for creek excavation has altered the topography in this area, creating man-induced wetlands (atypical situations) that have the potential to be seasonal wetlands (problem areas).																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, White House Pool, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Riparian area adjacent to Sir Francis Drake Blvd south of West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 20A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Oenanthse sarmentosa</i>	Herb	OBL	_____	_____	_____
3. <i>Scirpus microcarpus</i>	Herb	OBL	_____	_____	_____
4. <i>Poa trivialis</i>	Herb	FACW	_____	_____	_____
5. <i>Juncus patens</i>	Herb	FAC	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ 2 _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Inundation was present in early March. Sampling was conducted only 10 days after the last large rainfall, and there had been 4.08 inches of rainfall in the last 14 to 18 days. However, it appeared likely that saturation would persist at least 14 to 18 days. Algae were also present in the water, suggesting long-term ponding. This area is a depressional area fed by a seep off the Inverness Ridge, and seep flows are bermed to some extent by the created and/or alluvial levee bordering Lagunitas Creek.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 15 to 30 % Slopes		Drainage Class:	
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?	
				Yes	No <input checked="" type="checkbox"/>
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2		No mottles	Gravelly, clayey loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Hydric soil criterion does NOT appear to be met. Soil had a low chroma of (2), but there were no mottles. The potential for mottling may have minimized by the gravelly nature of the soils present.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Sampling point is a depressional area fed by a seep off the Inverness Ridge, and seep flows are bermed to some extent by the created and/or alluvial levee bordering Lagunitas Creek. While the hydric soil criterion did not appear to be met, the presence of inundation more than 14 to 18 days since the last rainfall indicates that the soils are hydric.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, White House Pool, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Levee area adjacent to Sir Francis Drake Blvd south of West Pasture	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 20C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Holcus lanatus</i>	Herb	FAC	_____	_____	_____
2. <i>Brassica nigra</i>	Herb	NL	_____	_____	_____
3. <i>Vicia sativa ssp. sativa</i>	Herb	FACU	_____	_____	_____
4. <i>Geranium carolinanum</i>	Herb	NL	_____	_____	_____
5. <i>Artemisia douglasiana</i>	Herb	FACW	_____	_____	_____
6. <i>Phalaris aquatica</i>	Herb	FAC+	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is NOT met. Dominant vegetation is less than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. Soil was not saturated or inundated in early March, and sampling was conducted only 10 days after the last large rainfall. In addition, there had been 4.08 inches of rainfall in the last 14 to 18 days, and the month itself was quite wet. There were no other primary or secondary indicators. The area is located on either a created or alluvial levee bordering Lagunitas Creek. Topographic position (top of levee) probably encourages quick draining of any creek overbank flows.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Inverness Loam, 15 to 30 % Slopes		Drainage Class:	
Taxonomy (Subgroup):				Field Observations Confirm Mapped Type?	
				Yes	No <input checked="" type="checkbox"/>
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2		No mottles	Fine sandy loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors			<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)		
Remarks: Hydric soil criterion is NOT met. Soil had a low chroma of (2), and there were no mottles. Sandiness of soil and topographic position (top of levee) probably encourage quick draining of any creek overbank flows.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland? Yes <input checked="" type="checkbox"/> No
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Sampling point is located on either a created or alluvial levee bordering Lagunitas Creek. Topographic position (top of levee) and sandiness of soils probably encourage quick draining of any creek overbank flows.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, White House Pool, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Depressional area along path in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 21A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Euthamia occidentalis</i>	Herb	OBL	_____	_____	_____
2. <i>Poa annua?</i>	Herb	FACW-	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ 0 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Saturation was present in early March. Sampling was conducted only 10 days after the last large rainfall, and there had been 4.08 inches of rainfall in the last 14 to 18 days. However, it appeared likely that saturation would persist at least 14 to 18 days. Secondary indicators were oxidized pore channels (distinct, abundant) and algal matting. This area is a depressional feature that encourages ponding of precipitation and surface run-off by low permeability of clay soils.</p>	

SOILS

Map Unit Name				Drainage Class:			
(Series and Phase):		Xerothents, fill		Field Observations Confirm Mapped Type?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Taxonomy (Subgroup):							
Profile Description							
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.		
0-5	A	10YR 3/1		No mottles	Clay material		
5-12+	A/B	10YR 2/2		No mottles	Gravelly clayey loam		
Hydric Soil Indicators:							
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions					
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils					
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils					
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List					
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List					
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)					
<p>Remarks: Hydric soil criterion is met. Soil had a low chroma of (1), so, therefore, no mottles are required. Low permeability of clay soil layer probably sustains ponding and saturation within soil surface.</p>							

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<p>Remarks: Sampling point is a depressional area along path in White House Pool park. The distinct clay layer present may point to a fill episode in this past, as this area is known to have been filled substantially in the past. This layer probably encourages long-term ponding and saturation of surface run-off and precipitation.</p>					

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, White House Pool, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Area along path in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 21C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
3. <i>Conium maculatum</i>	Herb	FACW	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks: Hydrologic criterion did NOT appear to be met. The area is located in a floodplain terrace riparian stand set back from Lagunitas Creek in White House Pool County Park. Soil was almost saturated at bottom of 13" hole, but sampling was conducted in early March, only 10 days after the last large rainfall. In addition, there had been 4.08 inches of rainfall in the last 14 to 18 days, and the month itself was quite wet. There were no secondary indicators, although there appeared to be possibly sediment deposits. However, sediment deposits may have occurred during some creek flooding event with recurrence interval greater than 1.5-2 years.

SOILS

Map Unit Name					
(Series and Phase): Xerothents, Fill		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2		No mottles	Clayey loam with a lot of sand and gravel
Hydric Soil Indicators:					
_____ Histosol		_____ Concretions			
_____ Histic Epipedon		_____ High Organic Content in Surface Layer in Sandy Soils			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils List			
_____ Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. Soil had a low chroma of (2), but there were no mottles. The lack of hydric features in the soil suggests that sediment deposits observed (see Hydrology) in this floodplain terrace area probably result from episodic flooding rather than floods with recurrence intervals < 2 years.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: This sampling point is located within an abandoned floodplain or floodplain terrace area that supports riparian habitat. It is likely that this area has been filled historically dating back to the turn of the 20 th century. While sediment deposits were observed, it is likely that this is a result of episodic flooding that occurs during floods with recurrence intervals > 1.5- 2 years. During the past 50 years, this area has had two very large storms: a 50-year storm in 1982 and a 10-year storm in 1998. The former particularly was shown to have created huge sedimentation in the southern portion of Tomales Bay (Roberto Anima, U.S. Geological Survey).	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, White House Pool, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Depressional area in southern portion of White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 22

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
3. <i>Cirsium vulgare</i>	Herb	FACU	_____	_____	_____
4. <i>Juncus patens</i>	Herb	FAC	_____	_____	_____
5. <i>Juncus effusus</i>	Herb	OBL	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 80%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. Soil was moist at bottom of hole, however, sampling was conducted in early Marc, only 10 days after the last large rainfall. In addition, there had been 4.08 inches of rainfall in the last 14 to 18 days, and the month itself was quite wet. There were no primary or secondary indicators. The area is located in a small depression in the floodplain terrace of Lagunitas Creek, although it is not immediately adjacent to the creek. The area may receive some surface run-off from Sir Francis Drake Boulevard to the south. Texture of soil probably encourages quick draining of any creek overbank flows during larger storm events or surface run-off from Sir Francis Drake Boulevard.</p>	

SOILS

Map Unit Name					
(Series and Phase): Xerothents, Fill		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/2		No mottles	Sandy clay loam with fill on top
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydricsoil criterion is NOT met. Soil had a low chroma of (2), but there were no mottles. Texture of soil probably encourages quick draining of any creek overbank flows during larger storm events or surface run-off from Sir Francis Drake Boulevard.</p>					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: Sampling point is located in a small depression in the floodplain terrace of Lagunitas Creek, although it is not immediately adjacent to the creek. The area may receive some surface run-off from Sir Francis Drake Boulevard to the south. Texture of soil probably encourages quick draining of any creek overbank flows during larger storm events or surface run-off from Sir Francis Drake Boulevard.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, White House Pool, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Depressional floodplain area in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 23A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Euthamia occidentalis</i>	Herb	OBL	_____	_____	_____
2. <i>Dipsacus sativa</i>	Herb	NL	_____	_____	_____
3. <i>Oenanthе sarmentosa</i>	Herb	OBL	_____	_____	_____
4. <i>Juncus patens</i>	Herb	FAC	_____	_____	_____
5. <i>Juncus effusus</i>	Herb	OBL	_____	_____	_____
6. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 100% _____

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other species present include *Erechtites minima* (NL) and *Brassica nigra* (NL).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 8 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 6 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Saturation and free water was present. Sampling was conducted in early March, only 10 days after the last large rainfall, and there had been 4.08 inches of rainfall in the last 14 to 18 days. However, it appeared likely that saturation would persist at least 14 to 18 days. Another primary indicator was sediment deposits, which probably results from overflow of the Bear Valley Creek drainage onto its floodplain when this was the primary outlet for the creek. (Since 1998, drainage pattern of Bear Valley Creek has shifted to flow through another culvert further east, and the adjacent drainage channel now principally drains the Silver Hills drainage.) A secondary indicator was algal matting. This area is a depressional basin within a former floodplain terrace for Bear Valley Creek that probably still receives both surface and subsurface hydrologic influences from the remnant channel, which now principally drains the Silver Hills drainage. Currently, however, the primary hydrologic sources are probably surface run-off from Sir Francis Drake Boulevard and a drainage that flows into the basin from a small culvert located east of the Silver Hills drainage. Saturation is promoted by the clayey nature of the loam soils present.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/1		No mottles	Clayey loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion is met. Soil had a low chroma of (1), so, therefore, no mottles are required. Low permeability of clayey loam soil probably sustains saturation within soil surface. While it is possible that this soil is the mapped type, it is also likely that the area has been filled to some degree, as well.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Remarks: Sampling point is a depressional basin within a former floodplain terrace for Bear Valley Creek that probably still receives both surface and subsurface hydrologic influences from the remnant channel, which now principally drains the Silver Hills drainage. Currently, however, the primary hydrologic sources are probably surface run-off from Sir Francis Drake Boulevard and a drainage that flows into the basin from a small culvert located east of the Silver Hills drainage. Saturation is promoted by the clayey nature of the loam soils present..</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, White House Pool, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Depressional Area in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 23C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Euthamia occidentalis</i>	Herb	OBL	_____	_____	_____
2. <i>Dipsacus sativus</i>	Herb	NL	_____	_____	_____
3. <i>Conium maculatum</i>	Herb	FACW	_____	_____	_____
4. <i>Erechtites minima</i>	Herb	NL	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 50%

Remarks: Vegetative criterion is met. Dominant vegetation is equal to 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary or secondary hydrologic indicators, and sampling was conducted in early March, 10 days after the last large rainfall. In addition, there had been 4.08 inches of rainfall in the last 14 to 18 days, and the month itself was quite wet. Sampling point is a depressional basin within a former floodplain terrace for Bear Valley Creek that probably still receives both surface and subsurface hydrologic influences from the remnant channel, which now principally drains the Silver Hills drainage. Currently, however, the primary hydrologic sources are probably surface run-off from Sir Francis Drake Boulevard and a drainage that flows into the basin from a small culvert located east of the Silver Hills drainage. The sampling point is located in a slightly higher elevation portion of the basin relative to Sampling Point 23A and, therefore, does not appear to have wetland hydrology.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2		No mottles	Clayey loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion is NOT met. Soil had a low chroma of (2), but there were no mottles. While it is possible that this soil is the mapped type, it is also likely that the area has been filled to some degree, as well.</p>					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: This sampling point is located in a slightly higher elevation portion of a depressional basin within a former floodplain terrace for Bear Valley Creek that probably still receives both surface and subsurface hydrologic influences from the remnant channel, which now principally drains the Silver Hills drainage. Currently, however, the primary hydrologic sources are probably surface run-off from Sir Francis Drake Boulevard and a drainage that flows into the basin from a small culvert located east of the Silver Hills drainage.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, White House Pool, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Riparian Area along path in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 24

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
3. <i>Lonicera involucrata</i>	Herb	FAC	_____	_____	_____
4. <i>Ribes menziesii</i>	Herb	NL/new name?	_____	_____	_____
5. <i>Oenanthe sarmentosa</i>	Herb	OBL	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion did NOT appear to be met. The area is located in a slightly depressional feature within the floodplain terrace riparian area adjacent to Lagunitas Creek in White House Pool County Park. Soil was moist at the bottom of the hole, but not saturated. Sampling was conducted in early March, only 10 days after the last large rainfall. In addition, there had been 4.08 inches of rainfall in the last 14 to 18 days, and the month itself was quite wet. There were no secondary indicators, although there appeared to be at least one primary indicator, sediment deposits. However, based on the location of the sampling point, sediment deposits may have occurred during some creek flooding event with recurrence interval greater than 1.5-2 years. The depressional feature probably ponds water for a short time (~ 5 days), but is dry by 14- to 18 days.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2		No mottles	Clayey loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydricsoil criterion is NOT met. Soil had a low chroma of (2), but there were no mottles. The lack of hydric features in the soil suggests that sediment deposits observed (see Hydrology) in this floodplain terrace area probably result from episodic flooding rather than floods with recurrence intervals < 2 years.</p>					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: This sampling point is located within a depressional feature within an abandoned floodplain or floodplain terrace area of Lagunitas Creek that supports riparian habitat. While sediment deposits were observed, it is likely that this is a result of episodic flooding that occurs during floods with recurrence intervals > 1.5-2 years. During the past 50 years, this area has had two very large storms: a 50-year storm in 1982 and a 10-year storm in 1998. The former particularly was shown to have created huge sedimentation in the southern portion of Tomales Bay (Roberto Anima, U.S. Geological Survey).</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, White House Pool, Point Reyes	Date: 3/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Riparian Area along Sir Francis Drake in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 25

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks: Hydrologic criterion is NOT met. The area is located in a slightly depressional feature within the floodplain terrace riparian area adjacent to Sir Francis Drake Boulevard. There were no primary or secondary hydrologic indicators, and sampling was conducted in early March, only 10 days after the last large rainfall. In addition, there had been 4.08 inches of rainfall in the last 14 to 18 days, and the month itself was quite wet. Sampling point is a depressional feature. Currently, the primary hydrologic sources are probably surface run-off from Sir Francis Drake Boulevard and a drainage that flows into the basin from a small culvert located east of the Silver Hills drainage. However, hydrologic inputs do not appear to be sufficient to create wetland hydrology.

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2		No mottles	Clayey loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydricsoil criterion is NOT met. Soil had a low chroma of (2), but there were no mottles.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
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Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: This sampling point is located slightly depressional feature within the floodplain terrace riparian area adjacent to Sir Francis Drake Boulevard. There were no primary or secondary hydrologic indicators, so hydrologic inputs from surface run-off and a small drainage do not appear to be sufficient to create wetland hydrology.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Creek, Point Reyes	Date: 4/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Riparian Area along Sir Francis Drake in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 26

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Fraxinus latifolia</i>	Tree	FACW	_____	_____	_____
3. <i>Ribes menziesii</i>	Shrub	NL/new name?	_____	_____	_____
4. <i>Toxicodendron diversilobum</i>	Shrub	NL	_____	_____	_____
5. <i>Equisetum arvense</i>	Herb	FAC	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 60%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ ? Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion did NOT appear to be met. The area is located in a floodplain terrace riparian area adjacent to Sir Francis Drake Boulevard in White House Pool County Park. There was no inundation, free water in the hole, or saturation. Sampling was conducted in early April, only 12 days after the last large rainfall (1.51 inches). Prior to this rain event, the month of March had been pretty dry. There were some very faint oxidized pore channels, and there appeared to be at least one primary indicator, sediment deposits. However, based on the location of the sampling point, sediment deposits may have occurred during some creek flooding event with recurrence interval greater than 1.5-2 years.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 3/3		No mottles	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydricsoil criterion is NOT met. Soil did not have a low chrom (3).					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: This sampling point is located within the floodplain terrace riparian area adjacent to Sir Francis Drake Boulevard. While sediment deposits were observed, it is likely that this is a result of episodic flooding that occurs during floods with recurrence intervals > 1.5- 2 years. During the past 50 years, this area has had two very large storms: a 50-year storm in 1982 and a 10-year storm in 1998. The former particularly was shown to have created huge sedimentation in the southern portion of Tomales Bay (Roberto Anima, U.S. Geological Survey).</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Creek, Point Reyes	Date: 4/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Riparian Area along Sir Francis Drake in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 27

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
3. <i>Artemisia douglasiana</i>	Herb	FACW	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion did NOT appear to be met. The area is located in a floodplain terrace riparian area adjacent to Sir Francis Drake Boulevard east of White House Pool County Park. There was no inundation, free water in the hole, or saturation. Sampling was conducted in early April, only 12 days after the last large rainfall (1.51 inches). Prior to this rain event, the month of March had been pretty dry. There appeared to be at least one primary indicator, sediment deposits, but there were no other primary or secondary indicators. Based on the location and elevation of the sampling point, sediment deposits may have occurred during some flooding event along Olema Creek with recurrence interval greater than 1.5-2 years.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/1		No mottles	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion did NOT appear to be met. Soil had a low chroma (1), but, based on the location and elevation of the Sampling Point, it would appear that it does not have wetland hydrology.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
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Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: This sampling point is located within the floodplain terrace riparian area adjacent to Sir Francis Drake Boulevard. While sediment deposits were observed, it is likely that this is a result of episodic flooding that occurs during floods with recurrence intervals > 1.5- 2 years. During the past 50 years, this area has had two very large storms: a 50-year storm in 1982 and a 10-year storm in 1998. The former particularly was shown to have created huge sedimentation in the southern portion of Tomales Bay (Roberto Anima, U.S. Geological Survey).																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Creek, Point Reyes	Date: 4/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Riparian Area along Sir Francis Drake in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 28

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Fraxinus latifolia</i>	Tree	FACW	_____	_____	_____
3. <i>Rubus discolor</i>	Shrub	FACW	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion did NOT appear to be met. The area is located in an abandoned floodplain terrace riparian area adjacent to Sir Francis Drake Boulevard where Olema Creek flows underneath the road. There was no inundation, free water in the hole, or saturation. Sampling was conducted in early April, only 12 days after the last large rainfall (1.51 inches), although, prior to this rain event, the month of March had been pretty dry. There appeared to be at least one primary indicator, sediment deposits, but there were no other primary or secondary indicators. However, based on the location of the sampling point, sediment deposits may have occurred during some creek flooding event with recurrence interval greater than 1.5-2 years, as this area is significantly elevated above the base elevation of the creek. The primary hydrologic source for this area would appear to be surface run-off from Sir Francis Drake Boulevard.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type?		
			Yes		No <input checked="" type="checkbox"/>
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2		No mottles	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion is NOT met. Soil had a low chroma (2), but not the mottles required to classify it as hydric. It is likely that soils in this area have been affected by historic road maintenance activities.</p>					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
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Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: This sampling point is located within the floodplain terrace riparian area adjacent to Sir Francis Drake Boulevard. While sediment deposits were observed, it is likely that this is a result of episodic flooding that occurs during floods with recurrence intervals > 1.5- 2 years. During the past 50 years, this area has had two very large storms: a 50-year storm in 1982 and a 10-year storm in 1998. The former particularly was shown to have created huge sedimentation in the southern portion of Tomales Bay (Roberto Anima, U.S. Geological Survey). Most of the hydrologic inputs currently are from surface run-off, and it appears that these inputs are really not sufficient to create hydric soil conditions.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Creek, Point Reyes	Date: 4/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Riparian Area along Sir Francis Drake in White House Pool County Park	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 29

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Prunus</i> sp.	Tree	NL	_____	_____	_____
3. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
4. <i>Carex obnupta</i>	Herb	OBL	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 75%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. *Alnus rubra* (FACW) and *Stachys chamissonis* (OBL) were also present.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p><input checked="" type="checkbox"/> Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. The area is located in a relatively low elevation floodplain terrace riparian area adjacent to Olema Creek on the south side of Sir Francis Drake Boulevard. There was no inundation, free water in the hole, or saturation. Sampling was conducted in early April, only 12 days after the last large rainfall (1.51 inches), although, prior to this rain event, the month of March had been pretty dry. There appeared to be two primary indicators, sediment deposits and wrack lines. Based on the relatively low elevation of this sampling point, sediment deposits probably occurred during creek flooding event with recurrence interval less than 2 years.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Blucher-Cole complex, 2 to 5 percent slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No _____		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/1		No mottles	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Soil had a low enough chroma (1) that mottles are not required to classify it as hydric.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: This sampling point is located within a low elevation floodplain terrace riparian area adjacent to Olema Creek. Based on the elevation of this sampling point, sediment deposits probably occurred during creek flooding event with recurrence interval less than 2 years.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Green Bridge Park, Point Reyes	Date: 4/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Depressional basin in Green Bridge County Park south of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 30A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Holcus lanatus</i>	Herb	FAC	_____	_____	_____
2. <i>Lolium</i> sp.	Herb	FAC	_____	_____	_____
3. <i>Rumex conglomeratus</i>	Herb	FACW	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Sampling was conducted in early April, only 12 days after the last large rainfall (1.51 inches). Prior to this rain event, the month of March had been pretty dry. However, at least two secondary indicators were observed: faint, abundant oxidized pore channels and algal matting. In addition, detritus appeared to be discolored from ponding of water and matted. Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that spills into and ponds within this depressional basin, surface run-off from adjacent uplands, and occasional creek overflow during very large storm events.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input type="checkbox"/> No <input type="checkbox"/> <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		Distinct, abundant	Sandy loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion is met. Soil had a low chroma of (2) and mottles. The soil did not match the mapped type, which is not surprising as it is possible that the Giacomini once used this area to dispose of excavated materials from the Giacomini Ranch.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Remarks: Sampling point is a depressional basin on the north side of the Green Bridge County Park. Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that spills into and ponds within this depressional basin, surface run-off from adjacent uplands, and occasional creek overflow during very large storm events.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Green Bridge Park, Point Reyes	Date: 4/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Depressional basin in Green Bridge County Park south of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 30B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Leymus triticoides</i>	Herb	FAC+	_____	_____	_____
2. <i>Juncus balticus</i>	Herb	OBL	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion did NOT appear to be met. Sampling was conducted in early April, only 12 days after the last large rainfall (1.51 inches). Prior to this rain event, the month of March had been pretty dry. However, one primary indicator was observed: sediment deposits. Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that spills into and ponds within this depressional basin, surface run-off from adjacent uplands, and occasional creek overflow during very large storm events. It is likely that the sediment deposits result from creek overbank flooding during storm events with recurrence intervals > 2 years. This sampling point is located at a slightly higher elevation than Sampling Point 30A.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type?		
			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		No mottles	Sandy loam or Loamy sand
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion is NOT met. Soil had a low chroma of (2), but there were no mottles present. The soil did not match the mapped type, which is not surprising as it is possible that the Giacomini once used this area to dispose of excavated materials from the Giacomini Ranch.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Remarks: Sampling point is located in a slightly higher elevation portion of a depressional basin on the north side of the Green Bridge County Park. Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that spills into and ponds within this depressional basin, surface run-off from adjacent uplands, and occasional creek overflow during very large storm events. While sediment deposits were present, it is likely that these resulted from episodic flooding events with recurrence intervals greater than 2 years. During the past 50 years, this area has had two very large storms: a 50-year storm in 1982 and a 10-year storm in 1998. The former particularly was shown to have created huge sedimentation in the southern portion of Tomales Bay (Roberto Anima, U.S. Geological Survey).</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Green Bridge Park, Point Reyes	Date: 4/9/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Depressional basin in Green Bridge County Park south of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 30C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Holcus lanatus</i>	Herb	FAC	_____	_____	_____
2. <i>Rumex conglomeratus</i>	Herb	FACW	_____	_____	_____
3. <i>Lolium sp.</i>	Herb	FAC	_____	_____	_____
4. <i>Brassica nigra</i>	Herb	NL	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 75%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. Sampling was conducted in early April, only 12 days after the last large rainfall (1.51 inches). Prior to this rain event, the month of March had been pretty dry. However, there were no other primary or secondary indicators. Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that spills into and ponds within this depressional basin, surface run-off from adjacent uplands, and occasional creek overflow during very large storm events. This area and 30B are slightly higher in elevation than 30A, perhaps resulting in faster drainage or leaching of any waters.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		Distinct, abundant????	Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion appears to be met, however, they be misleading due to site history. Mottle-like features were present in soil with chroma of (2), but it is possible that these features are related to past fill removal and disposal activities and not indicative of hydrology in the current location. The soil did not match the mapped type, which is not surprising as it is possible that the Giacomini once used this area to dispose of excavated materials from the Giacomini Ranch.</p>					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: Sampling point is located in a higher elevation portion of a depressional basin on the north side of the Green Bridge County Park relative to Sampling Point 30A. Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that spills into and ponds within this depressional basin, surface run-off from adjacent uplands, and occasional creek overflow during very large storm events. However, these waters appear to drain quickly enough to not allow for creation of wetland hydrology. The mottling observed in the chroma (2) soils may be an artifact of the site history reflective of the fact that these areas have reputedly been filled with soils from the Giacomini Ranch.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southeast portion of East Pasture at Giacomini Ranch; Nearest well (EP6)	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 31A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Poa trivialis</i>	Herb	FACW	_____	_____	_____
2. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
3. <i>Trifolium repens</i>	Herb	(FAC)1996	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands. Other species present include *Festuca arundinacea* (FAC-) and *Rumex* sp.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ 0 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. While topographically this sampling point is at one of the highest elevations within the East Pasture, seep flow from the adjacent Point Reyes Mesa keeps the water table in this area for a long period through the winter and spring. Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that flows onto this pasture flat, irrigation flooding during the summer, surface run-off from adjacent uplands, and occasional Lagunitas Creek overflow during extremely large storm events. There may also possibly be some influence of Lagunitas Creek on the groundwater table in this area.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2			Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion appears to be met. Soil features such as mottles are unreliable, because this pasture area is flood irrigated. However, based on hydrology (saturation at 14-18 days and groundwater well monitoring data) and low chroma of soils (2), the soils would appear to be hydric regardless of irrigation.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Remarks: Sampling point is a pasture flat located in the southeast portion of the East Pasture of the Giacomini Ranch. While topographically this sampling point is at one of the highest elevations within the East Pasture, seep flow from the adjacent Point Reyes Mesa keeps the water table in this area for a long period through the winter and spring.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southeast portion of East Pasture at Giacomini Ranch; Nearest wells (EP5 and EP6)	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 31B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Poa trivialis</i>	Herb	FACW	_____	_____	_____
2. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
3. <i>Trifolium repens</i>	Herb	(FAC)1996	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands. Other species present include *Festuca arundinacea* (FAC-) and *Rumex* sp.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 11-12 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 7-8 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. While topographically this sampling point is at one of the highest elevations within the East Pasture, seep flow from the adjacent Point Reyes Mesa keeps the water table in this area for a long period through the winter and spring. However, this area is a little drier than Sampling Point 31A. Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that flows onto this pasture flat, irrigation flooding during the summer, surface run-off from adjacent uplands, and occasional Lagunitas Creek overflow during extremely large storm events. There may also possibly be some influence of Lagunitas Creek on the groundwater table in this area.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2			Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion appears to be met. Soil features such as mottles are unreliable, because this pasture area is flood irrigated. However, based on hydrology (saturation at 14-18 days and groundwater well monitoring data) and low chroma of soils (2), the soils would appear to be hydric regardless of irrigation.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Remarks: Sampling point is a pasture flat located in the southeast portion of the East Pasture of the Giacomini Ranch. While topographically this sampling point is at one of the highest elevations within the East Pasture, seep flow from the adjacent Point Reyes Mesa keeps the water table in this area for a long period through the winter and spring. Because it is further from the Mesa than Sampling Point 31A, it is also drier than Sampling Point 31A.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southeast portion of East Pasture at Giacomini Ranch; Nearest wells (EP5 and EP6)	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 31C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Poa trivialis</i>	Herb	FACW	_____	_____	_____
2. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
3. <i>Trifolium repens</i>	Herb	(FAC)1996	_____	_____	_____
4. <i>Rumex</i> sp.	Herb	_____	_____	_____	_____
5. <i>Fesuca arundinacea</i>	Herb	FAC-	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 75%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators such as inundation, saturation, or free water in the 14" hole. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. While the nearest groundwater well (EP5) did appear to have wetland hydrology based on the groundwater table being within 12-18 inches of the surface for 14 to 18 days, the well was unfortunately located in a topographic depression, and conditions did not appear to be reflective of this area. Primary hydrologic sources for this area appear to be irrigation flooding during the summer, precipitation, surface run-off from adjacent uplands, and occasional Lagunitas Creek overflow during extremely large storm events. There may also possibly be some influence of Lagunitas Creek on the groundwater table in this area.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2			Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion DOES NOT appear to be met. Soil features such as mottles are unreliable, because this pasture area is flood irrigated. However, based on hydrology (lack of saturation at 14-18 days), this area does not appear to be hydric despite the low chroma of soils (2).</p>					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: Sampling point is a pasture flat located in the southeast portion of the East Pasture of the Giacomini Ranch. This area appears to be distance enough from the Point Reyes Mesa and seep flow that it is not wet long enough to be characterized as having wetland hydrology.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southeast portion of East Pasture at Giacomini Ranch; Nearest wells (EP5 and EP6)	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 32

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Poa trivialis</i>	Herb	FACW	_____	_____	_____
2. <i>Spergularia rubra</i>	Herb	FAC-	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 50%

Remarks: Vegetative criterion is met. Dominant vegetation is equal to 50% hydrophytic. This Sampling Point was located in a very sparsely vegetated area (vegetation cover = 5-10%), suggestive of possible prolonged ponding conditions.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators such as inundation, saturation, or free water in the 14" hole, despite the fact that this area appear to be slightly depressional and sparsely vegetated, somewhat suggestive of possible prolonged ponding conditions. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. While the nearest groundwater well (EP5) did appear to have wetland hydrology based on the groundwater table being within 12-18 inches of the surface for 14 to 18 days, the well was unfortunately located in a topographic depression, and conditions did not appear to be reflective of this area. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, irrigation flooding during the summer, and occasional Lagunitas Creek overflow during extremely large storm events.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-15	A/B	10YR 3/2			Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion DOES NOT appear to be met. Soil features such as mottles are unreliable, because this pasture area is flood irrigated. However, based on hydrology (lack of inundation or saturation at 14-18 days), this area does not appear to be hydric despite the low chroma of soils (2).</p>					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: Sampling point is a slight depressional feature within a pasture flat located in the southeast portion of the East Pasture of the Giacomini Ranch. This area was sparsely vegetated, which suggested possible prolonged ponding conditions, but the lack of hydrology at the time of sampling may indicate simply some past disturbance event.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southeast portion of East Pasture at Giacomini Ranch; Nearest wells (EP5 and EP6)	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 33

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Glyceria occidentalis</i>	Herb	OBL	_____	_____	_____
2. <i>Lilaea scilloides</i>	Herb	OBL	_____	_____	_____
3. <i>Festuca arundinacea</i>	Herb	FAC-	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 66%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ 0 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. There was at least one primary indicator: saturation to the surface. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. This depressional feature is located within the same depression as groundwater well (EP5), which appeared to have wetland hydrology based on the groundwater table being within 12-18 inches of the surface for 14 to 18 days. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, irrigation flooding during the summer, and occasional Lagunitas Creek overflow during extremely large storm events.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-15	A/B	10YR 3/2			Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion appears to be met. Soil features such as mottles are unreliable, because this pasture area is flood irrigated. However, based on hydrology (saturation at 14-18 days and groundwater well data) and soil chroma (2), this area does appear to be hydric.</p>					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
<p>Remarks: Sampling point is a depressional feature within a pasture flat located in the southeast portion of the East Pasture of the Giacomini Ranch and is contiguous with the same depression that groundwater well EP5 was located.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southern portion of East Pasture at Giacomini Ranch; Nearest well (EP5)	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 34A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	(FAC)1996	_____	_____	_____
3. <i>Juncus balticus</i>	Herb	OBL	_____	_____	_____
4. <i>Cyperus eragrostis</i>	Herb	FACW	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: Saturated in top 2 inches of root zone (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. This area appears to be saturated within the top 2 inches of the root zone. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, irrigation flooding during the summer, and occasional Lagunitas Creek overflow during extremely large storm events.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2			Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion appears to be met. Soil features such as mottles are unreliable, because this pasture area is flood irrigated. However, based on hydrology (saturation at 14-18 days) and low chroma of soils (2), the soils would appear to be hydric regardless of irrigation.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Remarks: Sampling point is a pasture flat located in the southern portion of the East Pasture of the Giacomini Ranch. This area appears to be a slightly depressional flat that ponds enough precipitation during the winter to develop a characteristic wetland plant community regardless of irrigation.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southern portion of East Pasture at Giacomini Ranch; Nearest well (EP5)	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 34C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Fesuca arundinacea</i>	Herb	FAC-	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	(FAC)1996	_____	_____	_____
3. <i>Rumex</i> sp.	Herb	_____	_____	_____	_____
4. <i>Geranium carolinanum</i>	Herb	NL	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 33%

Remarks: Vegetative criterion is probably met, because *Rumex* sp. is probably greater than a FAC. Dominant vegetation would then be equal to 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators such as inundation, saturation, or free water in the 15" hole. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. While the nearest groundwater well (EP5) did appear to have wetland hydrology based on the groundwater table being within 12-18 inches of the surface for 14 to 18 days, the well was unfortunately located in a topographic depression, and conditions did not appear to be reflective of this area. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, irrigation flooding during the summer and occasional Lagunitas Creek overflow during extremely large storm events. This area appears to be slightly higher in elevation than Sampling Point 34A, and, therefore, waters may sheetflow off into lower elevation areas.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2			Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion DOES NOT appear to be met. Soil features such as mottles are unreliable, because this pasture area is flood irrigated. However, based on hydrology (lack of saturation at 14-18 days), this area does not appear to be hydric despite the low chroma of soils (2).</p>					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: Sampling point is a pasture flat located in the southern portion of the East Pasture of the Giacomini Ranch. This area appears to be slightly higher in elevation than Sampling Point 34A, and, therefore, waters may sheetflow off into lower elevation areas.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southern portion of East Pasture at Giacomini Ranch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 35

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Rumex occidentalis</i>	Herb	OBL	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	(FAC)1996	_____	_____	_____
3. <i>Poa annua</i>	Herb	FACW-	_____	_____	_____
4. <i>Geranium carolinanum</i>	Herb	NL	_____	_____	_____
5. <i>Cirsium vulgare</i>	Herb	FACU	_____	_____	_____
6. <i>Brassica nigra</i>	Herb	NL	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 50%

Remarks: Vegetative criterion is met. Dominant vegetation is equal to 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands. This area is significantly disturbed from agricultural activities (manuring, land leveling) and possibly past episodic flooding events.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators such as inundation, saturation, or free water in the 15" hole. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. There possibly were some very faint, few oxidized pore channels, but these were no prominent or common enough to qualify as a secondary indicator. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, irrigation flooding during the summer and occasional Lagunitas Creek overflow during extremely large storm events. This area does appear to be higher in elevation due possibly to large sedimentation events from past episodic flooding, as well as sediment dumping by the Giacominis.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Blucher-Cole complex, 2 to 5 percent slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/3			Silt/Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion does NOT appear to be met. There were no hydric features within the soil, and the soil was not low chroma (3). Soil borings conducted by the Park Service's hydrologic consultants, Kamman Hydrology & Engineering, showed this area has received large amounts of sediment from episodic flooding (flood events with greater than 2-year recurrence intervals).					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td style="width:30%;">Hydrophytic Vegetation Present?</td> <td style="width:10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width:10%;">Yes</td> <td style="width:10%; text-align: center;"><input type="checkbox"/></td> <td style="width:10%;">No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	Wetland Hydrology Present?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No	Hydric Soils Present?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No	<table style="width:100%;"> <tr> <td style="width:50%;">Is this Point Within a Corps Wetland?</td> <td style="width:10%; text-align: center;">Yes</td> <td style="width:10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width:10%;">No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;">Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Is this Point Within a Corps Wetland?	Yes	<input checked="" type="checkbox"/>	No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/>	Yes	No	Is this Point Within a NPS Wetland?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No																								
Wetland Hydrology Present?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No																								
Hydric Soils Present?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>	No																								
Is this Point Within a Corps Wetland?	Yes	<input checked="" type="checkbox"/>	No																									
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/>	Yes	No																									
Is this Point Within a NPS Wetland?	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>																									
Remarks: Sampling point is a pasture flat located in the southern portion of the East Pasture of the Giacomini Ranch. This area appears to be slightly higher in elevation than adjacent areas, probably due to sediment deposited either by episodic flooding or by sediment dumping by the Giacominis.																												

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southwestern portion of East Pasture at Giacomini Ranch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 36A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	(FAC)1996	_____	_____	_____
3. <i>Rumex crispus</i>	Herb	FACW-	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: Saturated in top 2 inches of root zone (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. This area appears to be saturated within the top 2 inches of the root zone, but not necessarily saturated at depth. This hydrology may result from water perching in the upper column of the soil, perhaps because of the dense roots of the rhizomatous grasses. In certain areas, Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, irrigation flooding during the summer, and occasional Lagunitas Creek overflow during extremely large storm events.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type?		
_____			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2			Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. The soil is low enough chroma (1) that mottles are not required.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is a pasture flat located in the southwestern portion of the East Pasture of the Giacomini Ranch. This area appears to be a wetland flat that has hydrology because water remains perched in the upper column of the soil, perhaps because of the dense roots of the rhizomatous grasses.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 3/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amelia Ryan	State: CA
Site Location: Southwestern portion of East Pasture at Giacomini Ranch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 36C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Rumex crispus</i>	Herb	FACW-	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	(FAC)1996	_____	_____	_____
3. <i>Unknown grass</i>	Herb	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 100% _____

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands. The unknown grass was newly germinated, so therefore difficult to identify, but it was possibly *Lolium* sp. or *Phalaris* sp.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators such as inundation, saturation, or free water in the 15" hole. Sampling was conducted in mid March, 11 days after the last rainfall (0.65 inches) and 14 days after the last large rainfall event (>2 inches of rain). Prior to this, the month of February had been pretty wet. There were faint and few oxidized pore channels, but they not frequent or prominent enough to qualify as a secondary indicator. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, irrigation flooding during the summer and occasional Lagunitas Creek overflow during extremely large storm events. This area appears to be slightly higher in elevation than Sampling Point 36A, and, therefore, waters may sheetflow off into lower elevation areas.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/3			Silt/Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion DOES NOT appear to be met. Based on the hydrology (lack of saturation at 14-18 days) and soil chroma (3), this area does not appear to be hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Sampling point is a pasture flat located in the southwestern portion of the East Pasture of the Giacomini Ranch. This area appears to be slightly higher in elevation than Sampling Point 36A, and, therefore, waters may sheetflow off into lower elevation areas.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 4/6/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Tomasini Triangle area in East Pasture of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 37A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FAC(1996)	_____	_____	_____
3. <i>Festuca arundinacea</i>	Herb	FAC-	_____	_____	_____
4. <i>Unknown grass</i>	Herb	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 50%

Remarks: Vegetative criterion is met. Dominant vegetation is equal to 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands. The unknown grass was newly germinated, so therefore difficult to identify.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ 12 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Sampling was conducted in early April, 9 days after the last large rainfall (1.51 inches). Prior to this rain event, the month of March had been pretty dry. Water depth in nearby groundwater monitoring well (EP8) was at 35 inches at the time of sampling. However, at least one secondary indicator was observed: distinct, abundant oxidized pore channels. Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that elevates the water table in this area, surface run-off from adjacent uplands, and precipitation. This pasture is either not irrigated or irrigated infrequently.</p>	

SOILS

Map Unit Name					
(Series and Phase): Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____			
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/1		Abundant oxidation features	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Soil had a low chroma of (1), so mottles are not required. Abundant oxidation features were observed at 12".					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is a flat in the so-called Tomasini Triangle portion of the East Pasture of the Giacomini Ranch. This entire portion of the pasture is often extremely wet, because of the abundant seep and surface drainage from the Point Reyes Mesa.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Green Bridge Park, Point Reyes	Date: 4/6/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Tomasini Triangle portion of East Pasture of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 37C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Festuca arundinacea</i>	Herb	FAC-			
2. <i>Geranium dissectum</i>	Herb	NL			
3. <i>Trifolium repens</i>	Herb	FAC(1996)			
4. _____	_____	_____			
5. _____	_____	_____			
6. _____	_____	_____			
7. _____	_____	_____			
8. _____	_____	_____			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 33%

Remarks: Vegetative criterion is NOT met. Dominant vegetation is less than 50% hydrophytic. Other species present included *Alopecurus pratensis* (FACW) and *Cirsium vulgare* (FACU). *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators, and sampling was conducted in early April, 12 days after the last large rainfall (1.51 inches). Prior to this rain event, the month of March had been pretty dry. Water depth in nearby groundwater monitoring well (EP8) was at 35 inches at the time of sampling. However, one secondary indicator may have been present: there appeared to be distinct, common oxidized pore channels, but there were no other secondary hydrologic indicators. This Sampling Point is slightly elevated from Sampling Point 37A: the Giacomini appeared to have used dredge material from the nearby drainage at the base of the Mesa to fill in the tip of the "triangle." Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that elevates the water table in this area, surface runoff from adjacent uplands, and precipitation. This pasture is either not irrigated or irrigated infrequently.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>	
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		No mottles	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. Soil had a low chroma of (2), but there were no mottles present.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: This Sampling Point is located in the southeastern portion of the East Pasture in the so-called "Tomasini Triangle" and is slightly elevated from Sampling Point 37A: the Giacomini appeared to have used dredge material from the nearby drainage at the base of the Mesa to fill in the tip of the "triangle." Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that elevates the water table in this area, surface run-off from adjacent uplands, and precipitation. This pasture is either not irrigated or irrigated infrequently.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Green Bridge Park, Point Reyes	Date: 4/6/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Chelsea Donovan	State: CA
Site Location: Tomasini Triangle portion of East Pasture of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 37D

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Picris echioides</i>	Herb	FAC	_____	_____	_____
2. <i>Geranium carolinanum</i>	Herb	NL	_____	_____	_____
3. <i>Trifolium repens</i>	Herb	FAC(1996)	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = **66%**

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other species present included *Silybum marianum* (NL), *Agrostis stolonifera* (FACW), and *Festuca arundinacea* (FAC-). *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators, and sampling was conducted in early April, 12 days after the last large rainfall (1.51 inches). Prior to this rain event, the month of March had been pretty dry. Water depth in nearby groundwater monitoring well (EP8) was at 35 inches at the time of sampling. However, one secondary indicator may have been present: there appeared to be distinct, abundant oxidized pore channels, but there were no other secondary hydrologic indicators. This Sampling Point is slightly elevated from Sampling Points 37A and 37C: the Giacomini appeared to have used dredge material from the nearby drainage at the base of the Mesa to fill in the tip of the "triangle." Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that elevates the water table in this area, surface run-off from adjacent uplands, and precipitation. This pasture is either not irrigated or irrigated infrequently.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		No mottles	
Hydric Soil Indicators:					
_____ Histosol		_____ Concretions			
_____ Histic Epipedon		_____ High Organic Content in Surface Layer in Sandy Soils			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils List			
_____ Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. Soil had a low chroma of (2), but there were no mottles present.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td>_____ Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td>_____ Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td>_____ Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	_____ Yes	<input checked="" type="checkbox"/> No	Wetland Hydrology Present?	_____ Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	_____ Yes	<input checked="" type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td>Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td>Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td>_____ Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	Yes	<input checked="" type="checkbox"/> No	Is this Point Within a NPS Wetland?	_____ Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	_____ Yes	<input checked="" type="checkbox"/> No																	
Wetland Hydrology Present?	_____ Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	_____ Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	_____ Yes	<input checked="" type="checkbox"/> No																	
<p>Remarks: This Sampling Point is located in the southeastern portion of the East Pasture in the so-called "Tomasini Triangle" and is slightly elevated from Sampling Points 37A and 37C: the Giacomini appeared to have used dredge material from the nearby drainage at the base of the Mesa to fill in the tip of the "triangle." Primary hydrologic sources for this area appear to be seep flow from the adjacent Point Reyes Mesa that elevates the water table in this area, surface run-off from adjacent uplands, and precipitation. This pasture is either not irrigated or irrigated infrequently.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/11/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Central portion of East Pasture of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 38

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FAC(1996)	_____	_____	_____
3. <i>Rumex</i> sp.	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ 0.5-1 _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 14.5 _____ (in.)</p> <p>Depth to Saturated Soil: _____ Saturated within top 1" _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Sampling was conducted in mid February, 17 days after the last significant period of rainfall (1.74 inches). Prior to this rain event, the month of January had been pretty wet. Water depth in nearby groundwater monitoring well (EP4) was at 29 inches below the ground surface at time of sampling. There were abundant oxidized pore channels, however, these pastures are irrigated during the summer, so these features are unreliable. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, and, to a lesser extent, groundwater. Despite the fact that the groundwater table exceeded 12-18 inches 17 days after the last rainfall, it appears that precipitation ponds on the soil surface, permeating at least the top 1 inch of the soil, long enough to create wetland hydrologic conditions within the root zone of these plant species. It is very possible that the dense, matted roots of some of the rhizomatous pasture grasses actually promote ponding by limiting the amount of water that leaches down into the lower soil horizons. Once the hole was dug, a substantial amount of water from the soil surface ran down into the hole, practically filling it.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		Abundant oxidation features	
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion appears to be met. Soil had wetland hydrology and a low chroma of (2) with abundant oxidation features, although the oxidation features must be discarded due to the fact that the soil is flood irrigated during the summer.</p>					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
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Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
<p>Remarks: Sampling point is a flat in the central portion of the East Pasture of the Giacomini Ranch. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, and, to a lesser extent, groundwater. Despite the fact that the groundwater table exceeded 12-18 inches 17 days after the last rainfall, it appears that precipitation ponds on the soil surface, permeating at least the top 1 inch of the soil, long enough to create wetland hydrologic conditions within the root zone and encourage colonization by hydrophytic plant species.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/11/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Central portion of East Pasture of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 39

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Stellaria media</i>	Herb	FACU	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FAC(1996)	_____	_____	_____
3. <i>Ranunculus muricatus</i>	Herb	FACW+	_____	_____	_____
4. <i>Trifolium fragiferum</i>	Herb	NI	_____	_____	_____
5. <i>Lolium sp.</i>	Herb	FAC	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 75%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. This area has been significantly disturbed through agricultural activities, creating a very mixed community of plant species. Other plant species present include *Atriplex triangularis* (FACW), *Plantago major* (FACW-), *Rorippa palustris* (OBL), and *Lythrum hyssopifolium* (FACW). *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ 0.5-1 (in.)</p> <p>Depth to Free Water in Pit: _____ 16.5 (in.)</p> <p>Depth to Saturated Soil: _____ Saturated within top 1" (in.)</p>	

Remarks: Hydrologic criterion is met. Sampling was conducted in mid February, 17 days after the last significant period of rainfall (1.74 inches). Prior to this rain event, the month of January had been pretty wet. Water depth in nearby groundwater monitoring well (EP4) was at 29 inches below the ground surface at time of sampling. There were abundant oxidized pore channels, however, these pastures are irrigated during the summer, so these features are unreliable. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, and, to a lesser extent, groundwater. Despite the fact that the groundwater table exceeded 12-18 inches 17 days after the last rainfall, it appears that precipitation ponds on the soil surface, permeating at least the top 1 inch of the soil, long enough to create wetland hydrologic conditions within the root zone of these plant species. It is very possible that the dense, matted roots of some of the rhizomatous pasture grasses actually promote ponding by limiting the amount of water that leaches down into the lower soil horizons. Once the hole was dug, a substantial amount of water from the soil surface ran down into the hole, practically filling it.

SOILS

Map Unit Name					
(Series and Phase): Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____			
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A/B	10YR 2/2			
12-	B	10YR3/2			
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion appears to be met. Soil had wetland hydrology and a low chroma of (2). This area has been significantly disturbed by agricultural activities.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
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Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
<p>Remarks: Sampling point is a flat in the central portion of the East Pasture of the Giacomini Ranch. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, and, to a lesser extent, groundwater. Despite the fact that the groundwater table exceeded 12-18 inches 17 days after the last rainfall, it appears that precipitation ponds on the soil surface, permeating at least the top 1 inch of the soil, long enough to create wetland hydrologic conditions within the root zone and encourage colonization by hydrophytic plant species.</p>																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/11/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Central portion of East Pasture of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 40

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
2. <i>Trifolium repens</i>	Herb	FAC(1996)	_____	_____	_____
3. <i>Rumex</i> sp.	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. *Trifolium repens* was listed as a FACU+ in the 1988 National List, but in the draft 1996 list, it was listed as a FAC species within California, which agrees better with our observations on its occurrence within wetlands and uplands.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ 0.5-1 _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 11.5 _____ (in.)</p> <p>Depth to Saturated Soil: _____ Saturated within top 1" _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Sampling was conducted in mid February, 17 days after the last significant period of rainfall (1.74 inches). Prior to this rain event, the month of January had been pretty wet. Water depth in nearby groundwater monitoring well (EP4) was at 29 inches below the ground surface at time of sampling. There were abundant oxidized pore channels, however, these pastures are irrigated during the summer, so these features are unreliable. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, and, to a lesser extent, groundwater. Despite the fact that the groundwater table exceeded 12-18 inches 17 days after the last rainfall, it appears that precipitation ponds on the soil surface, permeating at least the top 1 inch of the soil, long enough to create wetland hydrologic conditions within the root zone of these plant species. It is very possible that the dense, matted roots of some of the rhizomatous pasture grasses actually promote ponding by limiting the amount of water that leaches down into the lower soil horizons. Once the hole was dug, a substantial amount of water from the soil surface ran down into the hole, practically filling it.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Blucher-Cole complex, 2 to 5 percent slopes		Drainage Class: _____	
Taxonomy (Subgroup):			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		Abundant oxidation features	Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion appears to be met. Soil had wetland hydrology and a low chroma of (2) with abundant oxidation features, although the oxidation features must be discarded due to the fact that the soil is flood irrigated during the summer.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is a flat in the central portion of the East Pasture of the Giacomini Ranch. Primary hydrologic sources for this area appear to be precipitation, surface run-off from adjacent uplands, and, to a lesser extent, groundwater. Despite the fact that the groundwater table exceeded 12-18 inches 17 days after the last rainfall, it appears that precipitation ponds on the soil surface, permeating at least the top 1 inch of the soil, long enough to create wetland hydrologic conditions within the root zone and encourage colonization by hydrophytic plant species.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/11/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Eastern portion of East Pasture of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 41

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
2. <i>Festuca arundinacea</i>	Herb	FAC-	_____	_____	_____
3. <i>Rumex</i> sp.	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 50%

Remarks: Vegetative criterion is met. Dominant vegetation is equal to 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 9 _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks: Hydrologic criterion is met. Sampling was conducted in mid February, 17 days after the last significant period of rainfall (1.74 inches). Prior to this rain event, the month of January had been pretty wet. Water depth in nearby groundwater monitoring well (EP1) was at 9.5 inches below the ground surface at time of sampling. There were abundant oxidized pore channels, however, these pastures are irrigated during the summer, so these features are unreliable. Primary hydrologic sources for this area appear to be groundwater, which is recharged by diverted creek flow from Tomasini Creek and seep flow from the Point Reyes Mesa, as well as precipitation and surface run-off from adjacent uplands.

SOILS

Map Unit Name					
(Series and Phase): <u>Novato Clay</u>			Drainage Class: _____		
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		Abundant oxidation features	Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion appears to be met. Soil had wetland hydrology and a low chroma of (2) with abundant oxidation features, although the oxidation features must be discarded due to the fact that the soil is flood irrigated during the summer.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Remarks: Sampling point is a flat in the eastern portion of the East Pasture of the Giacomini Ranch. Primary hydrologic sources for this area appear to be groundwater, which is recharged by diverted creek flow from Tomasini Creek and seep flow from the Point Reyes Mesa, as well as precipitation and surface run-off from adjacent uplands.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Giacomini Ranch, Point Reyes	Date: 2/11/03
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Leslie Allen	State: CA
Site Location: Eastern portion of East Pasture of Giacomini Rnch	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Adjacent Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 42

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Agrostis stolonifera</i>	Herb	FACW	_____	_____	_____
2. <i>Hordeum brachyantherum</i>	Herb	FACW	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p><input checked="" type="checkbox"/> Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 8.5 - 9 _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Sampling was conducted in mid February, 17 days after the last significant period of rainfall (1.74 inches). Prior to this rain event, the month of January had been pretty wet. Water depth in nearby groundwater monitoring well (EP1) was at 9.5 inches below the ground surface at time of sampling. Algal matting, a secondary indicator, was also present. Primary hydrologic sources for this area appear to be groundwater, which is recharged by diverted creek flow from Tomasini Creek and seep flow from the Point Reyes Mesa, as well as precipitation and surface run-off from adjacent uplands.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Novato Clay</u>			Drainage Class: _____		
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
<u>Depth (inches)</u>	<u>Horizon</u>	<u>Matrix Color (Munsell Moist)</u>	<u>Mottle Colors (Munsell Moist)</u>	<u>Mottle Abundance/Size/Contrast</u>	<u>Texture, Concretions, Structure, etc.</u>
0-14	A/B	10YR 3/2		Abundant oxidation features	Clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion appears to be met. Soil had wetland hydrology and a low chroma of (2) with abundant oxidation features, although the oxidation features must be discarded due to the fact that the soil is flood irrigated during the summer.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Remarks: Sampling point is a flat in the eastern portion of the East Pasture of the Giacomini Ranch. Primary hydrologic sources for this area appear to be groundwater, which is recharged by diverted creek flow from Tomasini Creek and seep flow from the Point Reyes Mesa, as well as precipitation and surface run-off from adjacent uplands.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Marsh, Point Reyes	Date: 8/10/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amy Langston	State: CA
Site Location: Eastern portion of Olema Marsh adjacent to Olema Creek	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 43

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 8.5 - 9 _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary or secondary hydrologic indicators. Sampling was conducted in August, well past the rainy season. Sampling point is located on a floodplain terrace for Bear Valley Creek, which is perennial. It is likely that this area is flooded only episodically, and it may drain quickly when flooded.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Novato Clay</u>			Drainage Class: _____		
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		No mottles	Fill mix with loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. Soil had a low chroma of (2), but the mottling required to classify it as hydric was not present.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located on a floodplain terrace adjacent to Bear Valley Creek in Olema Marsh that is probably only episodically flooded and drains quickly once flooded.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Marsh, Point Reyes	Date: 8/10/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amy Langston	State: CA
Site Location: Southern portion of Olema Marsh adjacent to Olema Creek	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Non-Tidal Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 44A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Stachys chamissonis</i>	Herb	OBL	_____	_____	_____
3. <i>Athyrium filix-femina</i>	Herb	FAC	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ 5 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. The soil was still saturated despite the fact that sampling was conducted in August, well past the rainy season. Sampling point is located on a very low elevation floodplain terrace within Olema Marsh for Bear Valley Creek, which is perennial.</p>	

SOILS

Map Unit Name					
(Series and Phase): Fluvents, Channeled		Drainage Class: _____			
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR 3/2		No mottles	
5-12	A/B	10YR 2/1			
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input checked="" type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Soil had a low chroma of (1) within the A horizon, so mottling is not required. Also , soil matches mapped type, which is hydric.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
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Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located on a very low elevation floodplain terrace within Olema Marsh for Bear Valley Creek, which is perennial.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Marsh, Point Reyes	Date: 8/10/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amy Langston	State: CA
Site Location: Southern of Olema Marsh	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 44C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
3. <i>Urtica dioica</i>	Herb	FACW	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary or secondary hydrologic indicators. Sampling was conducted in August, well past the rainy season. Sampling point is located on a floodplain terrace within Olema Marsh for Bear Valley Creek, which is perennial. It is likely that this area is flooded only episodically, and it may drain quickly when flooded.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Fluents, Channeled</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 3/2		No mottles	Fill rock with loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input checked="" type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion is NOT met. Soil had a low chroma of (2), but the mottling required to classify it as hydric was not present. Area has probably been filled historically as part of adjacent road construction (Bear Valley Road), so, therefore, does not match mapped type, which is hydric.</p>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Remarks: Sampling point is located on a floodplain terrace adjacent to Bear Valley Creek in Olema Marsh that is probably only episodically flooded and drains quickly once flooded.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Marsh, Point Reyes	Date: 8/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amy Langston	State: CA
Site Location: Western portion of Olema Marsh	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Non-Tidal Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 45A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Alnus rubra</i>	Tree	FACW	_____	_____	_____
2. <i>Stachys chamissonis</i>	Herb	OBL	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other species present include *Ribes* sp., *Urtica dioica* (FACW), and *Rubus ursinus* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ 20-22 _____ (in.)</p> <p>Depth to Saturated Soil: _____ 15-20 _____ (in.)</p>	
<p>Remarks: Hydrologic criterion would appear to be met. The soil was still saturated at 15-20" despite the fact that sampling was conducted in August, well past the rainy season. It is likely that saturation would be within the top 12" 14 to 18 days after the last rainfall. Also, there were distinct and common oxidized pore channels. Sampling point is located on a very low elevation floodplain terrace within Olema Marsh for Bear Valley Creek, which is perennial.</p>	

SOILS

Map Unit Name					
(Series and Phase): Fluvents, Channeled		Drainage Class: _____			
Taxonomy (Subgroup): _____			Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-22	A/B	10YR 2/1		No mottles	Clay loam with pockets of sand
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input checked="" type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Soil had a low chroma of (1) within the A horizon, so mottling is not required. Soil matches mapped type, which is hydric.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located on a very low elevation floodplain terrace within Olema Marsh for Bear Valley Creek, which is perennial.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Marsh, Point Reyes	Date: 8/12/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amy Langston	State: CA
Site Location: Westen portion of Olema Marsh	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 45C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Umbellularia californica</i>	Tree	FAC	_____	_____	_____
3. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
4. <i>Rubus parviflorus</i>	Shrub	FAC+	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other species present include *Stachys chamissonis* (OBL), *Urtica dioica* (FACW), and *Alnus rubra* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion appears to be met. Sediment deposits, a primary indicator, were present, but there were no other primary or secondary indicators, suggesting that these may result from episodic flooding events on this higher elevation floodplain terrace that have recurrence intervals greater than 2 years. Sampling was conducted in August, well past the rainy season. Sampling point is located on a floodplain terrace within Olema Marsh for Bear Valley Creek, which is perennial.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Fluents, Channeled</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-14	A/B	10YR 2/2		No mottles	Loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. Soil had a low chroma of (2) , but the mottling required to classify it as hydric was not present. Area has probably been filled historically as part of adjacent road construction (Bear Valley Road).					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located on a higher elevation floodplain terrace adjacent to Bear Valley Creek in Olema Marsh that is probably only episodically flooded and drains quickly once flooded.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Marsh, Point Reyes	Date: 8/17/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amy Langston	State: CA
Site Location: Northwestern portion of Olema Marsh	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Non-Tidal Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 46

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Alnus rubra</i>	Tree	FACW	_____	_____	_____
2. <i>Scrophularia californica</i>	Herb	FAC	_____	_____	_____
3. <i>Carex</i> sp.	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other species present include *Ribes* sp., *Juncus patens* (FAC), *Juncus balticus* (OBL), and *Digitalis purpurea* (UPL-1996).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p><input checked="" type="checkbox"/> Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion would appear to be met. Sediment deposits and wrack lines, primary indicators, were present, but there were no other primary or secondary indicators. While it is possible that these sediment deposits and wrack lines resulted from episodic flooding, the elevation of this floodplain terrace suggests that it is flooded on a frequent basis (recurrence interval < 2 years).</p>	

SOILS

Map Unit Name (Series and Phase): <u>Novato Clay</u> Drainage Class: _____					
Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-15	A/B	10YR 3/1		No mottles	Very sandy soil – flood deposit material
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input checked="" type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Soil had a low chroma of (1) within the A horizon, so mottling is not required. Soil matches mapped type, which is hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Sampling point is located on a very low elevation floodplain terrace within Olema Marsh for Bear Valley Creek, which is perennial.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Marsh, Point Reyes	Date: 8/17/04
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons and Amy Langston	State: CA
Site Location: Depressional feature in grasslands east of Olema Marsh	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Isolated Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 47

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Holcus lanatus</i>	Herb	FAC	_____	_____	_____
2. <i>Mentha pulegium</i>	Herb	OBL	_____	_____	_____
3. <i>Lotus corniculatus</i>	Herb	FAC	_____	_____	_____
4. <i>Agrostis stolonifera?</i>	Herb	FACW	_____	_____	_____
5. <i>Lolium perenne</i>	Herb	FAC	_____	_____	_____
6. <i>Cyperus eragrostis</i>	Herb	FACW	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p><input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion would appear to be met. Drainage patterns, a primary indicator, and oxidized pore channels, a secondary indicator, were present. There were no other primary or secondary indicators, but sampling was conducted in August. Compaction of the soil, however, probably promotes prolonged ponding within this depressional feature, which appears to have been created. There is no outlet for the depression, so precipitation and surface run-off that enter the depressional feature appear to have no connection hydrologically with Olema Marsh.</p>	

SOILS

Map Unit Name					
(Series and Phase):		Barnabe very gravelly loam, 30 to 50 percent		Drainage Class: _____	
Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>	
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-6	A	10YR 3/1		Common/Distinct	Soil very compacted
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is met. Soil had a low chroma of (1) within the A horizon, so mottling is not required.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a Corps Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Remarks: Sampling point is located in a depressional feature within grassland area on the east side of Olema Marsh. This feature appears to have been created. Soil compaction and lack of an outlet promotes ponding and establishment of hydrophytic vegetation. The lack of an outlet suggests that it is hydrologically isolated from Olema Marsh.																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Bear Valley Creek, Point Reyes	Date: 2/7/05
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Amelia Ryan	State: CA
Site Location: Downstream portion of Bear Valley Creek near Bear Valley Road X-ing	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Non-Tidal Wetland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 48A

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Oenanthе sarmentosa</i>	Herb	OBL	_____	_____	_____
2. <i>Hydrocotyle ranunculoides</i>	Herb	OBL	_____	_____	_____
3. <i>Lemna miniscula</i>	Herb	OBL	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other species present included *Veronica anagallis-aquatica* (OBL), *Phalaris aquatica* (FAC+), and *Lysichiton americanum* (OBL).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p><input checked="" type="checkbox"/> Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p><input checked="" type="checkbox"/> Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ ~24 _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is met. Inundation is present in this portion of Bear Valley Creek most, if not all of the year, due to a backwater flooding effect caused by the culvert at Bear Valley Road, which drain into Olema Marsh downstream.</p>	

SOILS

Map Unit Name (Series and Phase): <u>Fluents, Channeled</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No _____			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Sulfidic Odor	<input checked="" type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Gleyed or Low-Chroma Colors
<input type="checkbox"/> Concretions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input checked="" type="checkbox"/> Listed on Local Hydric Soils List	<input type="checkbox"/> Listed on National Hydric Soils List	<input type="checkbox"/> Other (Explain in Remarks)
Remarks: Hydric soil criterion is met. While water was too deep to get a soil sample, the soil probably matches the mapped soil type, Fluents, Channeled, and, more importantly, is undrained due to permanent ponding.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a Corps Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Point Within a NPS Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks: Sampling point is located in the center of Bear Valley Creek just before the creek flows through culverts into Olema Marsh. The culverts cause a backwater flooding effect, which maintains permanent inundation in this portion of the creek.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Bear Valley Creek, Point Reyes	Date: 2/17/05
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Amelia Ryan	State: CA
Site Location: Downstream portion of Bear Valley Creek near Limantour/BV Roads	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 48B

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Salix lucida ssp. lasiandra</i>	Tree	FACW	_____	_____	_____
3. <i>Carex obnupta</i>	Herb	OBL	_____	_____	_____
4. <i>Stachys chamissonis</i>	Herb	OBL	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p><input checked="" type="checkbox"/> Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators of inundation or saturation, and there had been recent, heavy rainfall less than two (2) days prior to sampling. This is a higher elevation floodplain terrace of Bear Valley Creek, which has probably built up naturally from sediment deposition, as well as unnaturally from sediment disposal activities after the catastrophic 1982 flood. Sediment deposits observed probably occur during less frequent storm events (recurrence intervals > 2 years), and flooding is probably only intermittent or temporary.</p>	

SOILS

Map Unit Name					
(Series and Phase): Fluvents, Channeled		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-2	A/B	10YR 3/1		none	Fine clay loam
2-15	A/B				Very light, gravelly soils from Inv Ridge
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion is NOT met. There were low-chroma (1) colors only in a very thin layer of surface soils, and most of the plants in this area are tapping into deeper portions of the soil. The coarse alluvial nature of the soils deposited off the Inverness Ridge means that any inundation or saturation probably quickly drains.</p>					

WETLAND DETERMINATION

<p>Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Is this Point Within a Corps Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Remarks: Sampling point is located in a higher elevation floodplain terrace of Bear Valley Creek, which has probably built up naturally from sediment deposition, as well as unnaturally from sediment disposal activities after the catastrophic 1982 flood. Sediment deposits observed probably occur during less frequent storm events (recurrence intervals > 2 years), and flooding is probably only intermittent or temporary.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Bear Valley Creek, Point Reyes	Date: 2/17/05
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons	State: CA
Site Location: Downstream portion of Bear Valley Creek near Limantour/BV Roads	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 48C

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Salix lucida ssp. lasiandra</i>	Tree	FACW	_____	_____	_____
3. <i>Rubus ursinus</i>	Shrub	FACW	_____	_____	_____
4. <i>Urtica dioica</i>	Herb	FACW	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). / = 100% _____

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p>_____ Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators of inundation or saturation, and there had been recent, heavy rainfall prior to sampling. This is a higher elevation floodplain terrace of Bear Valley Creek, which has probably built up naturally from sediment deposition, as well as unnaturally from sediment disposal activities after the catastrophic 1982 flood. This area is higher in elevation than Sampling Point 48B. Any flooding that occurs probably happens during only extreme storm events (>25 years) and is probably only intermittent in nature.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Fluents, Channeled</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes No <input checked="" type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-1	A			none	Heavy organic layer
1-15	A/B				Very light, gravelly soils from Inv Ridge
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. The soils were very light, and the coarse alluvial nature of the soils deposited off the Inverness Ridge means that any inundation or saturation probably quickly drains.					

WETLAND DETERMINATION

<table style="width: 100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width: 100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: Sampling point is located in a higher elevation floodplain terrace of Bear Valley Creek, which has probably built up naturally from sediment deposition, as well as unnaturally from sediment disposal activities after the catastrophic 1982 flood. Any flooding that occurs probably happens during only extreme storm events (>25 years).																			

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Bear Valley Creek, Point Reyes	Date: 2/17/05
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Amelia Ryan	State: CA
Site Location: Bear Valley Creek at Bear Valley Road X-omg	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 49

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Conium maculatum</i>	Herb	FACW	_____	_____	_____
3. <i>Ribes menziesii</i>	Herb	NL/new name?	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other plant species present include: *Cirsium vulgare* (FACU), *Rhamnus californica* (NL), and *Rubus ursinus* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. There were no primary indicators of inundation or saturation, and there had been recent, heavy rainfall within the last two (2) days. This is a higher elevation floodplain terrace of Bear Valley Creek, which has probably built up naturally from sediment deposition. Sediment deposits observed probably occur during only large storm events (recurrence intervals > 2 years), and flooding is probably only temporary or intermittent.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Fluents, Channeled</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No _____			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-15	A/B	10YR 3/1		none	Extremely coarse gravelly loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input checked="" type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
<p>Remarks: Hydric soil criterion would appear to be met. The soil is low chroma (1), and the soil type is listed on the local hydric soil list. However, the fact that there was no inundation or saturation two (2) days after a heavy rain during an above-average rainfall year suggests that the soil probably is not hydric, at least anymore.</p>					

WETLAND DETERMINATION

<p>Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No</p> <p>Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Remarks: Sampling point is located in a higher elevation floodplain terrace of Bear Valley Creek, which has probably built up naturally from sediment deposition. Sediment deposits observed probably occur during less frequent storm events (recurrence intervals > 2 years), and flooding is probably only intermittent or temporary.</p>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Olema Creek, Point Reyes	Date: 2/17/05
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Amelia Ryan and Lorraine Parsons	State: CA
Site Location: Olema Creek Floodplain on South Side of Levee Road	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 50

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Salix lasiolepis</i>	Tree	FACW	_____	_____	_____
2. <i>Carex obnupta</i>	Herb	OBL	_____	_____	_____
3. <i>Conium maculatum</i>	Herb	FACW	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic. Other plant species present include: *Foeniculum vulgare* (FACU) and *Rubus discolor* (FACW).

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p><input checked="" type="checkbox"/> Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	
<p>Remarks: Hydrologic criterion is NOT met. While there appeared to be three (2) primary indicators, most of these appear to relate to intermittent flooding in this small auxiliary or side channel drainage of f of the Olema Creek system. The soil was only moist after three (3) soild days of heavy rainfall in an above-average rainfall year with no significant dry period. Drift lines and sediment deposits observed probably occur from brief peak flow discharges during average storm events (recurrence intervals < 2 years) that probably drain through the gravelly soils quickly enough to preclude wetland hydrology.</p>	

SOILS

Map Unit Name					
(Series and Phase): <u>Blucher-Cole Complex, 2 to 5 % Slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-15	A/B	10YR 3/2		none	Gravelly loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input checked="" type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. While drainageways within this soil complex are considered a hydric inclusion, the fact that there were no mottles in the chroma (2) soils and no signs of persistent hydrology suggests that the soil probably is not hydric.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Point Within a Corps Wetland? Yes <input checked="" type="checkbox"/> No Is this Point Within a CCC Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is this Point Within a NPS Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks: Sampling point is located in a secondary or auxiliary drainage channel for the lower Olema Creek floodplain near Levee Road. The absence of inundation or saturation after 3 days of heavy rain in an above average rainfall year suggests that drift lines and sediment deposits observed probably occur very brief flooding during average flow events (recurrence intervals < 2 years) that probably drains quickly once the storm has passed.	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Giacomini Wetland Restoration Project, Levee Road, Point Reyes	Date: 2/17/05
Applicant/Owner: Point Reyes National Seashore	County: Marin
Investigator: Lorraine Parsons	State: CA
Site Location: Olema Creek Floodplain on South Side of Levee Road	
Do Normal Circumstances exist on the site? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Community: Upland
Is the site significantly disturbed (Atypical Situation)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____
Is the area a potential Problem Area? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If needed, explain on reverse.)	Plot ID: 51

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <i>Leymus triticoides</i>	Herb	FAC+	_____	_____	_____
2. <i>Conium maculatum</i>	Herb	FACW	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). _____ / = 100%

Remarks: Vegetative criterion is met. Dominant vegetation is greater than 50% hydrophytic.

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>_____ Stream, Lake or Tide Gauge</p> <p>_____ Aerial Photographs</p> <p>_____ Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p>_____ Inundated</p> <p>_____ Saturated in Upper 12 inches</p> <p>_____ Water Marks</p> <p>_____ Drift Lines</p> <p><input checked="" type="checkbox"/> Sediment Deposits</p> <p>_____ Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>_____ Oxidized Root Channels in Upper 12 inches</p> <p>_____ Water-Stained Leaves</p> <p>_____ Local Soil Survey Data</p> <p>_____ FAC-Neutral Test</p> <p>_____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: _____ (in.)</p> <p>Depth to Free Water in Pit: _____ (in.)</p> <p>Depth to Saturated Soil: _____ (in.)</p>	

Remarks: Hydrologic criterion is NOT met. While there appeared to be one (1) primary indicators (sediment deposits), there was no inundation or saturation within the soil after three (3) solid days of heavy rainfall in an above-average rainfall year with no significant dry period. This is a higher elevation floodplain terrace of Olema Creek, which has probably built up naturally from sediment deposition. Sediment deposits observed probably occur during only large storm events (recurrence intervals > 2 years), and flooding is probably only temporary or intermittent.

SOILS

Map Unit Name					
(Series and Phase): <u>Blucher-Cole Complex, 2 to 5 % Slopes</u>		Drainage Class: _____			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Size/Contrast	Texture, Concretions, Structure, etc.
0-15	A/B	10YR 3/2		none	Loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil criterion is NOT met. The absence of mottles in a chroma (2) soil suggests that soils are not hydric.					

WETLAND DETERMINATION

<table style="width:100%;"> <tr> <td>Hydrophytic Vegetation Present?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Hydric Soils Present?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<table style="width:100%;"> <tr> <td>Is this Point Within a Corps Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a CCC Wetland?</td> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> </tr> <tr> <td>Is this Point Within a NPS Wetland?</td> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> </tr> </table>	Is this Point Within a Corps Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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Is this Point Within a CCC Wetland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																	
Is this Point Within a NPS Wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																	
Remarks: This sampling point is located in a higher elevation floodplain terrace of Olema Creek, which has probably built up naturally from sediment deposition. Sediment deposits observed probably occur during only large storm events (recurrence intervals > 2 years), and flooding is probably only temporary or intermittent.																			