May 3, 2010 JN 10-104465

CITY OF NEWPORT BEACH
Attention: Ms. Iris Lee
3300 Newport Boulevard
Newport Beach, CA 92663

SUBJECT: Buck Gully Canyon Restoration Project: Jurisdictional Update

Dear Ms. Lee:

RBF conducted the fieldwork for the enclosed Delineation of State and Federal Jurisdictional Waters (Delineation) on March 6, 2007. Since that time project design plans have become more detailed and jurisdictional impacts have become more defined.

The proposed project would permanently impact approximately 0.52-acre of Corps/Regional Board waters of the U.S., of which 0.06-acre is permanent. Impacts to California Department of Fish and Game jurisdiction consist of 1.84 acres, of which 0.32 are permanent. Additionally, the project would impact 2.31 acre of California Coastal Commission jurisdiction, of which 0.32 are permanent. Impacts are associated with the placement of three drop structures and five bend-way weirs to control erosion/sedimentation processes and restore Buck Gully to a healthy condition.

Please note that based on a detailed review of the current site conditions and project design plans, our research has indicated that it will be necessary to successfully obtain the following permits prior to commencement of any construction activities within the delineated jurisdictional areas:

- U.S. Army Corps of Engineers, Clean Water Section 404 Nationwide Permit;
- Santa Ana Regional Water Quality Control Board Clean Water Act Section 401 Water Quality Certification;
- California Department of Fish and Game 1602 Streambed Alteration Agreement; and,
- California Coastal Commission Coastal Development Permit

Sincerely,

Richard Beck

Richard Beck
Regulatory Manager
Environmental and Regulatory Services

BUCK GULLY CANYON RESTORATION PROJECT

CITY OF NEWPORT BEACH, CALIFORNIA

Delineation of State and Federal Jurisdictional Waters

Prepared For:

City of Newport Beach
3300 Newport Boulevard
Newport Beach, California 92663
Contact: Ms. Iris Lee
949/644-3311

Prepared By:

RBF Consulting
14725 Alton Parkway
Irvine, California 92618
Contact: Mr. Wesley Salter
949/330-4176

February 11, 2008

10-104465

BUCK GULLY CANYON RESTORATION PROJECT

CITY OF NEWPORT BEACH, CALIFORNIA

Delineation of State and Federal Jurisdictional Waters

The undersigned certify that this report is a complete and accurate account of the findings and conclusions of a jurisdictional "waters of the U.S." (including wetlands) and "waters of the State" determination for the above-referenced project.

RBF CONSULTING

Wesley Salter
Regulatory Specialist
Planning and Environmental Services

Richard Beck, REA
Regulatory Manager
Planning and Environmental Services

February 11, 2008

Executive Summary

At the request of the City of Newport Beach (City), RBF Consulting (RBF) has prepared this Delineation of Jurisdictional Waters for the Buck Gully Canyon Restoration Project, located in the City of Newport Beach, County of Orange, California. The fieldwork for this delineation was conducted on March 6, 2007. This delineation documents the regulatory authority of the U.S. Army Corps of Engineers (Corps), Santa Ana Regional Water Quality Control Board (Regional Board), California Department of Fish and Game (CDFG), and California Coastal Commission (CCC) pursuant to the Federal Clean Water Act (CWA), California Porter-Cologne Water Quality Control Act, California Fish and Game Code, and California Coastal Act. The project area was surveyed pursuant to the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Corps, 2006); the *Practices for Documenting Jurisdiction under Section 404 of the CWA* Regional Guidance Letter (Corps, 2007); and the *Field Guide to Lake and Streambed Alteration Agreements Section 1600-1607* (CDFG, 1994).

Please note that based on a detailed review of current site conditions, our research has indicated that it will be necessary for the project applicant to successfully obtain the following permits prior to commencement of any construction activities within the delineated jurisdictional areas: Corps 404 Nationwide Permit (NWP), Regional Board 401 Water Quality Certification, CDFG 1602 Streambed Alteration Agreement, and CCC Coastal Development Permit (CDP). Table ES-1, Summary Table, identifies each regulatory agency and their corresponding jurisdiction.

TABLE ES-1. Summary Table

Agency	Jurisdictional Acreage	Jurisdictional Impact Acreage (Temporary)	Required Permits
U.S. Army Corps of Engineers	0.86	0.55	NWP
Regional Water Quality Control Board	0.86	0.55	401 Certification
California Department of Fish and Game	4.42	1.86	1602 SAA
California Coastal Commission	4.42	1.86	CDP

This report presents RBF's best effort at determining the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. However, as with any jurisdictional delineation, only the regulatory agencies can make a final determination of jurisdiction. Generally, this would be a written concurrence in the form of a Jurisdictional Determination (JD) letter.

Table of Contents

LIST OF EXHIBITS

TABLES

APPENDIX

LIST OF ACRONYMS

BMP	Best Management Practices
CCC	California Coastal Commission
CCMP	California Coastal Management Program
CDFG	California Department of Fish and Game
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CWA	Clean Water Act
CZMP	Coastal Zone Management Plan
DBH	Diameter at Breast Height
EPA	Environmental Protection Agency
FAC	Facultative Vegetation
FACU	Facultative Upland Vegetation
FACW	Facultative Wetland Vegetation
IP	Individual Permit
JD	Jurisdictional Determination
MSL	Mean Sea Level
NRCS	Natural Resources Conservation Service
NWP	Nationwide Permit
OBL	Obligate Wetland Vegetation
OHWM	Ordinary High Water Mark
RBF	RBF Consulting
ROWD	Report of Waste Discharge
RPW	Relatively Permanent Waters
SAA	Streambed Alteration Agreement
SBBM	San Bernardino Base and Meridian
SR	State Route
SWANCC	Solid Water Agency of Northern Cook County
TNW	Traditional Navigable Water
UPL	Obligate Upland Vegetation
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDR	Waste Discharge Requirement
WoUS	Waters of the United States

Section 1 Introduction and Purpose

This delineation was prepared for the City of Newport Beach (City) in order to delineate the U.S. Army Corps of Engineers' (Corps), Santa Ana Regional Water Quality Control Board's (Regional Board), California Department of Fish and Game's (CDFG), and California Coastal Commission's jurisdictional authority for drainages located within the Buck Gully Canyon Restoration Project, herein referred to as the project site.

The project site is located within the City of Newport Beach, County of Orange, State of California, T.7S, R.9W, San Bernardino Base and Meridian (SBBM) (refer to Exhibit 1, *Regional Vicinity*). Specifically, the project site is located upstream from the Pacific Ocean and extends northeast to Pacific Coast Highway (PCH) (refer to Exhibit 2, *Site Vicinity*). The project site is situated within Buck Gully Canyon.

This delineation has been designed to document the authority of the regulatory agencies, the methodology undertaken by RBF Consulting (RBF) to document jurisdictional authority, and the findings made by RBF within the boundaries of the project site. This report presents our best effort at determining the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies; however, only the regulatory agencies can make a final determination of jurisdictional boundaries.

1.1 PROJECT SITE BACKGROUND

The project site is located within the coastal zone and is within a preserve area designated by the Coastal Subregion of Orange County's Natural Community Conservation Plan/Habitat Conservation Plan (refer to Exhibit 3, *Project Site*). The project site is surrounded by residential uses. On-site elevations range from approximately 10 feet above mean sea level (msl) to 100 feet above msl. Buck Gully consists of a natural stream draining a watershed of about two (2) square miles. Urbanized effects (i.e. encroachments, sediment loss, reduction in pervious areas, invasive plants, nuisance runoff, etc.) over the past 50 years have impacted the stream; particularly in the downstream reach from PCH to Little Corona Beach. Erosion and dynamic sediment processes have resulted in split flows, debris islands, and low-flow impingement along the toe of canyon slopes.

1.2 PROJECT DESCRIPTION

The proposed project consists of sedimentation control measures for the purposes of aquatic restoration and enhancement. Restoration efforts will include three (3) outfall structures, five (5) gabian structures or groyns, and associated grading. A large temporary easement will be

Project Site

BUCK GULLY CANYON RESTORATION PROJECT
• JURISDICTIONAL DELINEATION

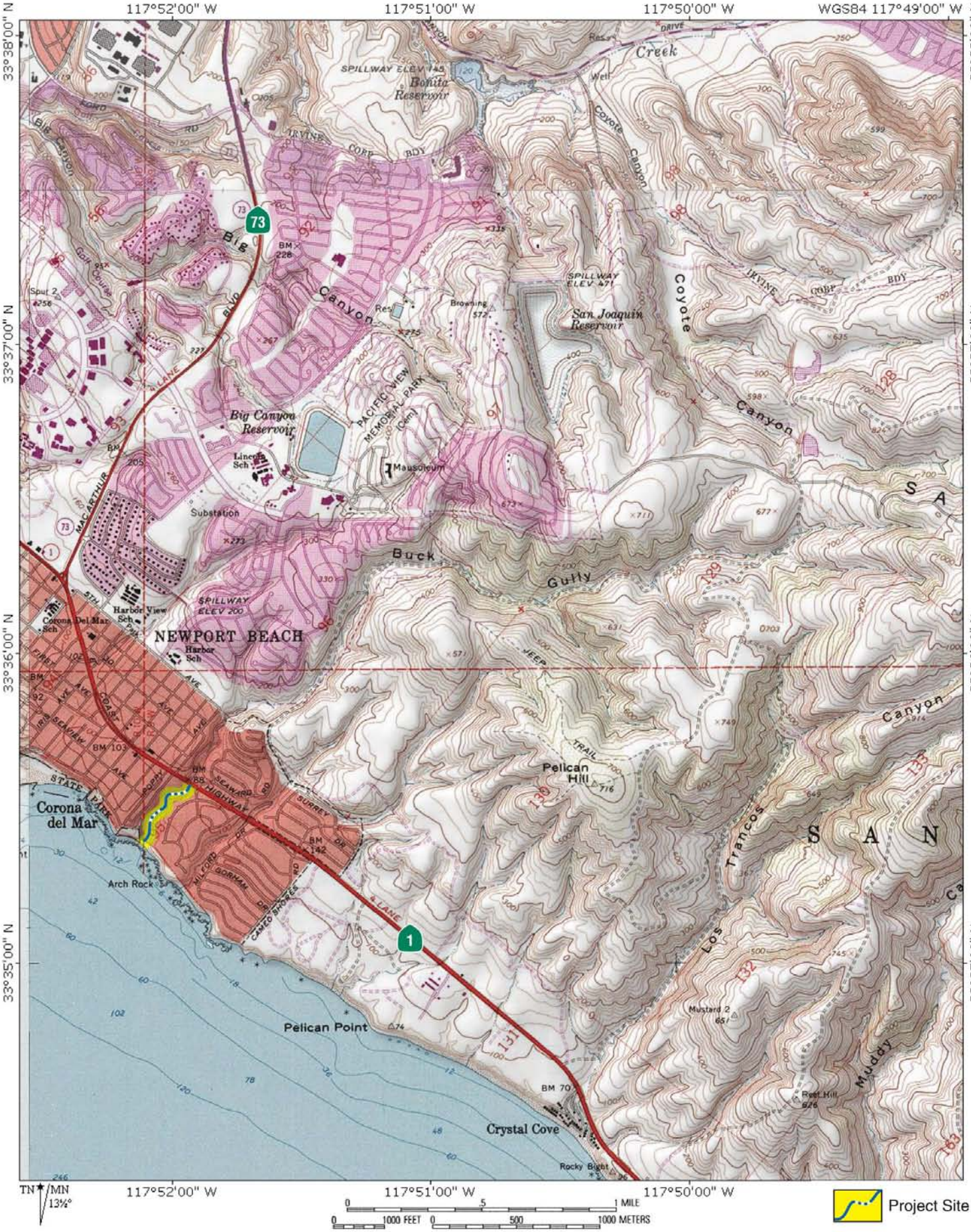
Regional Vicinity

RBF CONSULTING

not to scale

1/24/06 JN 10-104465-12599

Exhibit 1



Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

BUCK GULLY CANYON RESTORATION PROJECT
• JURISDICTIONAL DELINEATION

Site Vicinity

RBF CONSULTING

0 2500' APPROXIMATE

3/12/07 JN 10-104465-12599

Exhibit 2

RBF CONSULTING

not to scale

Project Site

2/7/08 JN 10-104552-12598

BUCK GULLY CANYON RESTORATION PROJECT
• JURISDICTIONAL DELINEATION

Project Site

Exhibit 3

utilized during restoration activities. A smaller permanent easement will be uitilized to encompass the area for the three (3) drop structures and five (5) gabion structures. Once the gabion structrures are installed, the project site shall be replanted within in-kind native seed mix so that vegetation cover can re-establish. Native vegetation will be allowed to grow through all structures associated with restoration activities. Vegetation maintenance is not anticipated to occur as a result of the proposed restoration activities.

Section 2 Summary of Regulations

There are four (4) key agencies that regulate activities within coastal streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA), and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act, and the CCC regulates development activities pursuant to the California Coastal Act of 1976.

2.1 U.S. ARMY CORPS OF ENGINEERS

The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States (WoUS) under Section 404 of the CWA. The Corps and Environmental Protection Agency (EPA) define "fill material" to include any "material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of the waters of the United States." Examples include, but are not limited to sand, rock, clay, construction debris, wood chips, and "materials used to create any structure or infrastructure in the waters of the United States." The term WoUS includes the following:

(1) all waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;

(2) wetlands;

(3) all waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds; the use, degradation or destruction of which could affect interstate or foreign commerce;

(4) all impoundments of water mentioned above;

(5) all tributaries of waters mentioned above;

(6) the territorial seas; and,

(7) all wetlands adjacent to the waters mentioned above.

Wetlands, a subset of jurisdictional waters, are jointly defined by the Corps and EPA as *"those areas that are inundated or saturated by surface or groundwater at a frequency and*

duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR §328.3(b))*"*. Wetlands generally include swamps, marshes, bogs, and similar areas. The process in which jurisdictional areas (if any) are identified is further discussed in Section 3.0, *Methodology.*

The Corps' regulatory program continues to evolve due to court rulings associated with litigation. The following court cases have further defined the Corps' jurisdiction:

2.1.1 SWANCC (Isolated Conditions)

A significant change in federal wetland regulation occurred on January 9, 2001, when the U.S. Supreme Court issued the decision on *Solid Waste Agency of Northern Cook County v. Corps* (SWANCC). The CWA Section 404 only regulates "navigable waters." In the past, the Corps and EPA interpreted the term WoUS broadly, to the extent that it reflected Congress' intention to regulate all waters that the Congress could constitutionally regulate under its commerce power (Commerce Clause). Specifically, if the water had any possible connection to interstate commerce, it fell within the scope of the CWA and under the Corps' jurisdiction. The Corps stated that WoUS includes, among other things, intrastate waters:

(1) that are or would be used as habitat by birds protected by migratory bird treaties; or

(2) that are or would be used as habitat by other migratory birds that cross state lines; or

(3) that are or would be used as habitat for endangered species; or

(4) that are or would be used to irrigate crops sold in interstate commerce.

This approach was referred to as The Migratory Bird Rule. Although the SWANCC site was not a wetland, the Corps found that approximately 121 bird species dependent on aquatic environments were observed at the site, therefore, the site contained jurisdictional waters. SWANCC sued to challenge the Corps' jurisdiction over the site, claiming that the Corps could not regulate non-navigable, isolated, intrastate waters based on the presence of migratory birds, and that Congress lacked authority under the Commerce Clause to grant the Corps such jurisdiction in any event. Overall, the U.S. Supreme Court reversed the finding and invalidated the Migratory Bird Rule. It held that the rule is not a fairly supported interpretation of the term WoUS, and the Corps exceeded its jurisdiction by interpreting the CWA's reach to include isolated, inland, non-navigable waters.

This delineation reflects the U.S. Supreme Court's decision and guidance from the Corps, which indicates non-navigable, isolated, intrastate waters (based on the presence of migratory birds) are no longer under the Corps' jurisdiction.

2.1.2 Rapanos (Significant Nexus)

The June 19, 2006, U.S. Supreme Court decision on the *Rapanos v. United States* (Rapanos) case further limited the definition of wetlands and WoUS under the CWA. The Rapanos decision was a 4-1-4 decision in which four justices advocated a narrower interpretation of the CWA to hold that WoUS excludes intermittent or ephemeral streams and wetlands without a continuous surface connection to navigable waters.

The Corps and EPA released a memorandum on June 5, 2007, in order to provide guidance in implementing the U.S. Supreme Court's Rapanos decision. In accordance with the Rapanos decision, the Corps will continue to assert jurisdiction over traditional navigable water (TNW) and all wetlands adjacent to TNWs; however, jurisdiction can be asserted over a waters, including wetlands, that is not a TNW by meeting either of the following standards:

(1) Relatively permanent (RPW) non-navigable tributaries of TNW and wetlands with a continuous surface connection with such tributaries; or,

(2) Certain adjacent and non-navigable tributaries that are not relatively permanent. This requires a case-by-case "significant nexus" analysis to determine whether waters and their adjacent wetlands are jurisdictional. A "significant nexus" may be found where waters, including adjacent wetlands, affect chemical, physical or biological integrity of TNWs.

This delineation reflects the U.S. Supreme Court's decision and guidance from the Corps, which requires a significant nexus for waters and wetlands in the absence of TNWs.

2.2 REGIONAL WATER QUALITY CONTROL BOARD

The nine (9) Regional Boards have the responsibility for protecting water quality in California. The Regional Board regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. The Regional Board's jurisdiction extends to all waters of the State (including SWANCC and Rapanos conditions) and to all WoUS (including wetlands).

Section 401 of the CWA gives the Regional Board the authority to regulate through 401 Certification any proposed federally permitted activity, which may affect water quality. Among such activities are discharges of dredged or fill material permitted by the Corps pursuant to Section 404 of the CWA. Section 401 requires the Regional Board to provide "certification that there is reasonable assurance that an activity which may result in the discharge to waters of the United States will not violate water quality standards." Water Quality Certification must be based on a finding that the proposed discharge will comply

with water quality standards, of which are found as numeric and narrative objectives in each of the Regional Board's Basin Plan.

The California Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne has become an important tool in the post SWANCC and Rapanos decisions, with respect to the State's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge (ROWD), should there be no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

2.3 CALIFORNIA DEPARTMENT OF FISH AND GAME

Historically, the State of California regulated activities in rivers, streams, and lakes pursuant to Sections 1600-1607 of the California Fish and Game Code. Legislation that took effect on January 1, 2004 repealed Fish and Game Code Sections 1600-1607 and added Fish and Game Code Sections 1600-1616. There is no longer separation between private/public notifications (previously 1601/1603). Fish and Game Code Sections 1600-1616 establish a fee based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state or local governmental agency, or public utility to notify the CDFG before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;

(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or

(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

This notification process is referred to as a 1602 Streambed Alteration Agreement (SAA). Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. Jurisdictional limits of the CDFG are not as clearly defined by regulation as those of the Corps. While they closely resemble the limits described

by Corps regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFG takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

Any of the below criteria could be applicable in determining what constitutes a stream depending on the potential for the proposed activity to adversely affect fish and other stream-dependent wildlife resources.

(1) The term stream can include intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams based on United States Geological Survey (USGS) maps, and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife.

(2) Biological components of a stream, may include aquatic and riparian vegetation, all aquatic animals including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system.

(3) As a physical system, a stream not only includes water (at least on an intermittent or ephemeral basis), but also a bed or channel, a bank and/or levee, instream features such as logs or snags, and various flood plains depending on the return frequency of the flood event being considered (i.e. 10, 50, or 100 years, etc.).

(4) The lateral extent of a stream can be measured in several ways depending on a particular situation and the type of fish or wildlife resource at risk. The following criteria are presented in order from the most inclusive to the least inclusive:

    (a) The flood plain of a stream can be the broadest measurement of a stream's lateral extent depending on the return frequency of the flood event used. For most flood control purposes, the 100-year flood plain exists for many streams. *However, the 100-year flood plain may include significant amounts of upland or urban habitat and therefore may not be appropriate in many cases*.

    (b) The outer edge of riparian vegetation is generally used as the line of demarcation between riparian and upland habitats and is therefore a

reasonable and identifiable boundary for the lateral extent of a stream. In most cases, the use of this criterion should result in protecting the fish and wildlife resources at risk.

(c) Most streams have a natural bank which confines flows to the bed or channel except during flooding. In some instances, particularly on smaller streams or dry washes with little or no riparian habitat, the bank should be used to mark lateral extent of a stream.

(d) A levee or other artificial stream bank would also be used to mark the lateral extent of a stream. However, in many instances, there can be extensive areas of valuable riparian habitat located behind a levee.

2.4 CALIFORNIA COASTAL COMMISSION

The CCC was established by voter initiative in 1972 (Proposition 20) and later made permanent by the Legislature through adoption of the California Coastal Act of 1976. The CCC, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Act to include (among others) construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the CCC or the local government.

The Coastal Act includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The policies of the Coastal Act constitute the statutory standards applied to planning and regulatory decisions made by the CCC and by local governments, pursuant to the Coastal Act.

Jurisdictional Areas within the Coastal Zone:

A comprehensive classification system of wetlands and deepwater habitats (also referred to as the "Cowardin Wetland Classification System") was developed for the U.S. Fish and Wildlife Service (USFWS) in order to create the National Inventory of Wetlands. Under this hierarchical system, classification is based on hydrologic regime, vegetative community, and to a lesser extent on water chemistry and soils. The classification includes both wetlands and deepwater habitats. The Cowardin system includes several layers of detail for wetland classification including: a subsystem of water flow, classes of substrate types, subclasses of

vegetation types and dominant species, as well as flooding regimes and salinity levels within the system. Overall, the Cowardin system and the Corps Section 404 regulations define wetlands differently. The most significant difference is that the Cowardin system defines wetlands to include mudflats and other wet areas that lack vegetation.

According to the classification, the USFWS defines wetlands as follows: "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, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominately hydrophytes; (2) the substrate is predominately undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year."

At the State and regional levels, the CDFG and the CCC, accept the USFWS definition and use it as a guide in identifying wetlands and in implementing their wetland policies. The Coastal Act (PRC Section 30121) defines "wetlands" as "lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens." In addition, the Coastal Act (PRC Section 30107.5) defines environmentally sensitive areas in a manner that would include rivers, streams or other aquatic habitat. The Coastal Act defines wetland fill (Section 30233(a)) as the following:

The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing or restoring previously dredged depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland, provided, however, that in no

event shall the size of the wetland area used for such boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, be grater than 25 percent of the total wetland area to be restored.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource-dependent activities.

2.5 ACTIVITIES REQUIRING PERMITS

Any development proposal that involves impacting drainages, streams, or wetlands on the site through filling, stockpiling, conversion to a storm drain, channelization, bank stabilization, road or utility line crossings, or any other modification would require permits from the Corps, the Regional Board, and the CDFG before any development could commence on the project site. Both permanent and temporary impacts are regulated and would therefore trigger the need for permits.

There are two (2) different permit categories utilized by the Corps, which include either a Nationwide Permit (NWP) or Individual Permit (IP). The specific permit required is primarily based on project description and jurisdictional impacts. The Corps will not issue its authorization until the Regional Board completes the Section 401 Water Quality Certification. Processing of the 401 Certification with the Regional Board and 1602 SAA with the CDFG can occur concurrently with the Corps permit process, since the agencies can utilize the same information and analysis. A ROWD is required by the Regional Board if SWANCC or Rapanos waters are present. Applications to both the Regional Board and the CDFG require submittal of a valid California Environmental Quality Act (CEQA) document along with the application.

Section 3 Methodology

Analysis presented in this document consists of field surveys and verification of current conditions conducted on March 6, 2007. While in the field, jurisdictional areas were recorded onto a base map at scale of 1" = 100' using the topographic contours and visible landmarks as guidelines.

3.1 WATERS OF THE U.S. AND STATE

The limits of the Corps' jurisdiction in non-tidal waters extend to the ordinary high water mark (OHWM), which is defined as "*. . . that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas* (33 CFR §328.3(e))." An OHWM can be determined by the observation of a natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community. The Regional Board shares Corps jurisdictional methodology, unless SWANCC or Rapanos conditions are present. In the latter case, the Regional Board considers such drainages to be jurisdictional. The CDFG's jurisdiction is defined to the top of bank of the stream/channel or to the limit (outer dripline) of the adjacent riparian vegetation.

3.2 WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Corps, 2006). The methodology set forth in the Interim Regional Supplement is based on the following three (3) indicators that are normally present in wetlands: (1) hydrology providing permanent or periodic inundation by groundwater or surface water, (2) hydric soils, and (3) hydrophytic vegetation. In order to be considered a wetland, an area must exhibit at least minimal hydric characteristics within these three parameters. Both Regional Board and CDFG jurisdictional wetlands encompass that of the Corps. In the field, vegetation, soils, and evidence of hydrology were examined via the methodology listed below and documented on Corps' wetland data sheets, when applicable.

3.2.1 Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, known as hydrophytic vegetation, are listed in regional publications of the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- *Tree Stratum:* Consists of woody plants 3 inches or more in diameter at breast height (DBH);
- *Sapling/Shrub Stratum:* Consists of woody plants less than 3 inches in DBH, regardless of height;
- *Herb Stratum:* Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,
- *Woody Vines:* Consists of all woody vines, regardless of size.

The following indicators are applied in the sequence presented. Hydrophytic vegetation is present if any of the indicators is satisfied.

Indicator 1 – Dominance Test

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that comprise at least 20% (also known as the "50/20 rule") of the total dominant coverage are recorded on a wetland data sheet. Wetland indicator status is assigned to each species using *The List of Plant Species that Occur in Wetlands* (USFWS, 1988). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation was considered to be met. Plant indicator status categories are described below:

- *Obligate Wetland (OBL):* Plants that occur almost always (estimated >99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated <1 percent) in non-wetlands (i.e., cattail or pickleweed);

- *Facultative Wetland (FACW):* Plants that occur usually (estimated >67 to 99 percent) in wetlands, but also occur (estimated 1 to 33 percent) in non-wetlands (i.e., mulefat or willow);

- *Facultative (FAC):* Plants with similar likelihood (estimated 33 to 67 percent) of occurring in both wetlands and non-wetlands;

- *Facultative Upland (FACU):* Plants that occur sometimes (estimated 1 to <33 percent) in wetlands, but occur more often (estimated >67 to 99 percent) in non-wetlands; and,

- *Obligate Upland (UPL):* Plants that occur rarely (estimated 1 percent) in wetlands, but occur almost always (estimated >99 percent) in non-wetlands under natural conditions.

Indicator 2 – Prevalence Index

The prevalence index is used to determine whether hydrophytic vegetation is present on sites where indicators of hydric soil and wetland hydrology are present but the vegetation initially fails the dominance test. The prevalence index takes in consideration all plant species in the community, not just a few dominants. The prevalence index is a weighted-average wetland indicator status of all plant species in the sampling plot, where each indicator status category is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5) and weighing is abundance (percent cover). Hydrophytic vegetation is present if the prevalence index is 3.0 or less.

Indicator 3 – Plant Morphological Adaptations

Plant morphological adaptations can be used to distinguish certain wetland plant communities in the Arid West, when indicators of hydric soil and wetland hydrology are present. Some hydrophytes develop easily recognized physical characters, or morphological adaptations, when they occur in wetland areas. Common morphological adaptations include, but are not necessarily limited to, adventitious roots and shallow root systems developed on or near the soil surface. To apply this indicator, these morphological features must be observed on more than 50 percent of the individuals of a FACU species living in an area where indicators of hydric soil and wetland hydrology are present.

3.2.2 Hydrology

Wetland hydrology indicators are presented in four (4) groups, which include:

Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

Group B – Evidence of Recent Inundation

Group B consist of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

Group C – Evidence of Recent Soil Saturation

Group C consist of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizopheres surrounding living roots and the presence of reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

Group D – Evidence from Other Site Conditions or Data

Group D consist of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

3.2.3 Soils

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper 16 inches. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet

because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 16 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to a depth of at least 16 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (1994). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables-hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation; iron reduction, translocation, and accumulation; and sulfate reduction are also recorded.

Hydric soil indicators are present in three (3) groups, which include:

<u>All Soils</u>

All soils refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

<u>Sandy Soils</u>

Sandy soils refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

<u>Loamy and Clayey Soils</u>

Loamy and clayey soils refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

3.3 SWANCC WATERS

The term "isolated waters" is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFG take jurisdiction via the OHWM/streambed and/or the 3-parameter wetland methodology utilized by the Corps.

3.4 RAPANOS WATERS

The Corps will assert jurisdiction over non-navigable, not relatively permanent tributaries and their adjacent wetlands where such tributaries and wetlands that have a significant nexus to a TNW. The flow characteristics and functions of the tributary itself in combination with the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of the TNWs. Factors considered in the significant nexus evaluation include:

(1) The consideration of hydrologic factors including, but not limited to, the following:

- volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary
- proximity to the TNW
- size of the watershed
- average annual rainfall
- average annual winter snow pack

(2) The consideration of ecologic factors including, but not limited to, the following:

- the ability for tributaries to carry pollutants and flood waters to TNWs
- the ability of a tributary to provide aquatic habitat that supports a TNW
- the ability of wetlands to trap and filter pollutants or store flood waters
- maintenance of water quality

Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) and ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water, are generally not considered jurisdictional waters.

In the presence of Rapanos drainage conditions, the Regional Board and CDFG take jurisdiction via the OHWM and/or the 3-parameter wetland methodology utilized by the Corps.

Section 4 Literature Review

Review of relevant literature and materials often aids in preliminarily identifying areas that may fall under an agency's jurisdiction. The following resources have been reviewed and utilized in the preparation of this delineation:

- California Regional Water Quality Control Board, Santa Ana Region, Water Quality Control Plan, 1995.
- City of Newport Beach, General Plan, July 25, 2006.
- Eagle Aerial, Aerial Photograph, 2007.
- City of Newport Beach Newport Coast Watershed Program. Evolution of watershed. http://www.city.newport-beach.ca.us/watershed/evolution%20of%20the%20watershed.htm
- U.S. Department of Agriculture, Soil Conservation Service, Soil Survey, Orange County and Western Part of Riverside County, California, 1978.
- U.S. Department of Homeland Security, Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Map No. 06059C0403H, dated February 18, 2004. http://msc.fema.gov.
- U.S. Fish and Wildlife Service, Department of Habitat and Resource Conservation, Wetland Geodatabase. http://wetlandsfws.er.usgs.gov/NWI/index.html.
- U.S. Geological Survey, 7.5 Minute Series Topographic Quadrangle, Laguna Beach, CA, 1965, photorevised 1981.

A summary of RBF's literature review is provided below (refer to Section 8.0 for a complete list of references used during the course of this delineation).

4.1 USGS TOPOGRAPHIC QUADRANGLE

The USGS maps show geological formations and their characteristics, describing the physical setting of an area through contour lines and major surface features including lakes, rivers, streams, buildings, landmarks, and other factors that may fall under an agency's jurisdiction. Additionally, the maps depict topography through color and contour lines, which are helpful in determining elevations and latitude and longitude within a project site.

Most topographic maps are made from aerial photos and, due to errors in photo interpretation, some streams which should be shown as "blue-line" or "dashed blue-line" are

not shown. Even the most detailed topographic maps (7.5 minute) do not show all streams. Drainages and wetlands do not need to be labeled on USGS maps in order to be jurisdictional.

According to the USGS Laguna Beach, California Quadrangle, on-site topography is approximately 10 feet above msl to 100 feet above msl. Buck Gully, flowing northeast to southwest, is tributary to the Pacific Ocean. Surrounding uses appear to consist of residential uses and the Pacific Ocean. No additional on-site lakes, marshes, or swamps were noted during the review of the USGS topographic map.

TABLE 1. Topographic Summary

Map Name	Laguna Beach, California
Map Year	1965, photorevised 1981
Map Provider	USGS
Property Elevation (feet)	10 to 100 feet above msl
Property Slope Type	Sloping
Property Slope Direction	Southwest
Map Contour Interval (feet)	20

4.2 AERIAL PHOTOGRAPH

Prior to the site visit, RBF reviewed an existing aerial photograph, provided by Eagle Aerial (2007), for the project site. Aerial photographs can be useful during the delineation process, as the photographs often indicate drainages and vegetation (i.e. riparian vegetation) present within the boundaries of the project site (if any).

According to the aerial photograph, the project site is surrounded by residential uses. The on-site drainage appears to contain riparian vegetation. Buck Gully conveys water to the southwest, eventually discharging into the Pacific Ocean at Little Corona Beach.

4.3 SOIL SURVEY

On-site soils were researched prior to the site visit. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the County list of hydric soils. Soil surveys furnish soil maps and interpretations originally needed in giving technical assistance to farmers and ranchers; in guiding other decisions about soil selection, use, and management; and in planning, research, and disseminating the results of the research. In addition, soil surveys are now heavily utilized in order to obtain soil information with respect

to potential wetland environments and jurisdictional areas (i.e., soil characteristics, drainage, and color).

According to the Orange County and Western Part of Riverside County, California Soil Survey, dated 1978, the project site is situated on the Myford association. The Myford association consists of moderately well drained soils on marine terraces. One (1) soil series is reported within the boundaries of the project site, and consists of the following:

> **Myford sandy loam, 9 to 30 percent slopes, eroded (177):** This strongly sloping to moderately steep soil generally occurs on side slopes of terraces. The profile is similar to the one described as typical of the series, but is very shallow because of erosion. On as much as 50 percent of the acreage, the subsoil is exposed or deep gullies have formed that prevent tillage. The Myford series consists of moderately well drained soils formed in sandy sediments. In a typical profile the surface layer is pale brown (10YR 4/3 moist) and pinkish gray (7.5YR 4/2 moist), medium acid sandy loam, about 4 inches thick. The upper 6 inches of the subsoil is brown (7.5YR 3/2 moist), medium acid sandy clay. The soil is very slowly permeable. If the soil is bare, runoff is rapid and the erosion hazard is high. Available water capacity is 1.5 to 3.5 inches. Present land use is range, watershed, wildlife and urban development. Subgroup: *Typic Palexeralfs.*

Based on the Soil Survey, the soil series present on-site may have the potential to have hydric soil characteristics.

4.4 HYDRIC SOILS LIST OF CALIFORNIA

RBF reviewed the Hydric Soils List of California, provided by the Natural Resources Conservation District (NRCS), dated December 15, 1995, in an effort to verify whether or not on-site soils are considered to be hydric. Lists of hydric soils along with soil survey maps are good off-site ancillary tools to assist in wetland determinations, but as expected, they are not a substitute for on-site investigations. According to the list, none of the above-mentioned soil types are anticipated to be hydric.

4.5 LOCAL CLIMATE

The local climate is typical of the Southern California Coastal Region. Winters are cool and moist; nearly all of the precipitation falls in winter. Summers are mild, warm, and dry. Average mean annual rainfall at most of the lower elevations of the region is approximately 14 inches. For the purposes of this delineation, the growing season is considered to be 365 days a year.

4.6 FLOOD ZONE

According to the existing FEMA flood maps, a portion of the project site appears to be located within the 100-year flood zone. The project site consists of Buck Gully and its associated floodplain.

4.7 GENERAL PLAN/ZONING CODE

Some local agencies have ordinances with respect to wetlands and streams. According to the City of Newport Beach General Plan, adopted July 25, 2006, specific policies with respect to wetland/riparian buffers were not noted.

4.8 WATERSHED REVIEW

The project site is located within the Newport Coast watershed. According to the City of Newport Beach Newport Coast Watershed Project website the Newport Coast Watershed covers about 10 square miles and extends South of Corona del Mar in Newport Beach to Morro Canyon. Most of this watershed area was annexed by the City of Newport Beach on January 1, 2002. The watershed encompasses eight coastal canyons, two of which are 303(d) listed for bacteria impacts. Seven of the canyons fall within the Regional Board Region 8 and City of Newport Beach limits. The eighth canyon, Morro Canyon, is part of Region 9 and is within the County of Orange's jurisdiction. This compact watershed area includes a very large percentage of native vegetation on undisturbed terrain.

TABLE 2. Project Site Summary

Project Site	Yes	No	Unknown
Within a 100-year floodplain?	X		
A blue-line stream?	X		
Within the California Coastal Zone?	X		
Reported groundwater level <6 feet below ground surface?		X	
Reported Wetland/Riparian Buffers per General Plan		X	

Section 5 Site Conditions

As described in Section 1.0, the project site is located within the City of Newport Beach, County of Orange, California. Refer to Sections 5.2 through 5.4, below, for discussion with respect to the three (3) wetland parameters or evidence of water flow defined in Section 3.0. Refer to Exhibit 4, *On-Site Photographs,* for representative photographs taken throughout the project sites.

5.1 LIMITATIONS

The following limitations were identified during the course of this delineation. Methodology was adjusted in areas where limitations were present. Some portions of the project were not accessible due to the presence of poison oak (*Toxicodendron diversilobum*) and dense vegetation.

5.2 VEGETATION

Vegetation located within the project site and observed during the March 6, 2007 site visit, included riparian scrub, freshwater marsh, coastal sage srub, chaparral, and ornamental landscaping. Riparian vegetation noted on-site included arroyo willow (*Salix lasiolepis*), California mugwort (*Artemisia douglasiana*), cattail (*Typha domingensis*), bulrush (*Scirpus microcarpus*), and creeping woodsorrel (*Oxalis corniculata*). Upland vegetation noted on-site included poison oak (*Toxicodendron diversilobum*), lemonade berry (*Rhus integrifolia*), and California sagebrush (*Artemisia californica*).

5.3 HYDROLOGY

Water flow varying in depth, associated with the surrounding residential uses, was noted within the project site during the March 6, 2007 site visit. The on-site drainage flows in a northeast/southwest direction, and is tributary to the Pacific Ocean. The drainage is considered an RPW and directly connects to the Pacific Ocean. Evidence of an OHWM was noted within the drainage via water flow, drift deposits, and erosional cuts. Generally, the OHWM varied in width from approximately 10 to 65 feet, primarily due to the range of slopes on-site.

5.4 SOILS

Approximately six (6) soil pits were dug during the March 6, 2007 site visit due to the presence of riparian vegetation. All three (3) wetland parameters were met within portions of the project site. On-site soils consisted of silt loam, sandy loam, and sand. The soils within

View looking southwest at the project site from PCH.

View looking north at the project site.

View looking south at the on-site Buck Gully and associated vegetation.

View of the southern portion of the drainage flowing to the Pacific Ocean.

BUCK GULLY CANYON RESTORATION PROJECT
• JURISDICTIONAL DELINEATION

On-Site Photographs

Exhibit 4

RBF CONSULTING

3/13/07 JN 10-104465-12599

the boundary of the project site were found to be consistent with those previously mentioned during the literature review in Section 3.4. Multiple hydric soil indicators were noted within the soil samples within portions of the project site (refer to Appendix A, *Wetland Data Forms*).

Section 6 Findings

This delineation was prepared for the City in order to delineate the Corps, Regional Board, CDFG, and CCC jurisdictional authority for drainages located within the project site. This report presents RBF's best effort at determining the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. However, as with any jurisdictional delineation, only the regulatory agencies can make a final determination of jurisdictional boundaries within a project site/property. Jurisdictional boundaries are broken down specifically by agency and are described below.

6.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

6.1.1 Wetland Determination

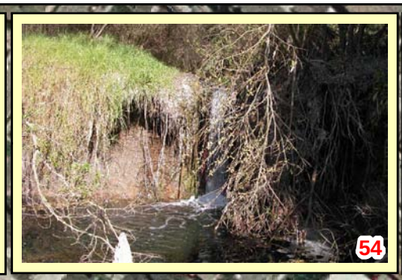
As previously noted in Section 3.2, an area must exhibit all three (3) of the wetland parameters described in the Corps Interim Regional Supplement to be considered a jurisdictional wetland. Based on the results of the field investigations, it was determined that portions of the project site contained all three (3) parameters. Based on the literature review and soil samples obtained during the field visit, hydrophytic vegetation and hydric soils are present within portions of the project site. Based on the site conditions, approximately 0.37 acres of Corps jurisdictional wetlands are present (refer to Exhibit 5, *Jurisdictional Map*). Of these 0.37 acres, restoration activities are anticipated to temporarily impact **0.21** acres of Corps wetlands.

6.1.2 "Waters of the U.S." Determination

Evidence of hydrology was noted within the project site and consisted of water flow, drift deposits, and erosional features. The on-site drainage appears to be perennial, containing water year-round. Based on the site conditions, approximately 0.49 acres of Corps "waters of the U.S." are located within the boundaries of the study area. Of these 0.49 acres, **0.34** acres will be impacted as a result of the proposed restoration activities.

6.2 REGIONAL WATER QUALITY CONTROL BOARD DETERMINATION

No isolated conditions were observed within the boundaries of the project site; therefore, the Regional Board follows that of Corps jurisdiction.



Pacific Coast Highway

Hazel Dr

Evening Canyon Rd

Pacific Ocean

M:\Mdata\1010379\GIS\Buck_Gully_Points_11x17.mxd Created By: DJ Date: 2/8/08

- Soil Pits
- Picture Points
- Project Improvements
- Permanent Easement
- Temporary Easment
- CCC Jurisdictional Wetland Impact
- Non Impacted CCC Jurisdictional Wetland Area
- Non Impacted CDFG Jurisdictional Area
- Corps/CDFG Jurisdictional Drainage Impact (Non-Wetland)
- Non Impacted Corps/CDFG Jurisdictional Drainage (Non-Wetland)
- CDFG Jurisdictional Vegetation Impact
- Corps Jurisdictional Wetland Impact
- Non Impacted Corps Jurisdictional Wetland
- Ornamental Vegetation

Buck Canyon Gully Restoration Project

Jurisdictional Map

0 75 150 300 Feet

Source: Eagle Aerial 2007

Exhibit 5

6.3 CALIFORNIA DEPARTMENT OF FISH AND GAME DETERMINATION

The on-site drainage/streambed is considered jurisdictional by the CDFG. The CDFG jurisdiction is similar to the Corps jurisdiction, but also encompasses riparian vegetation (to the outer dripline) when present. Based on the site conditions, approximately 4.42 acres of CDFG jurisdiction are located within the boundaries of the study area. Of these 4.42 acres, **1.86** acres will be impacted as a result of the proposed restoration activities.

6.4 CALIFORNIA COASTAL COMMISSION DETERMINATION

The entire project site is located within the coastal zone. The on-site drainage and associated riparian vegetation is considered a wetland within the coastal zone due to the presence of wetland hydrology, soils, and/or hydrophytic vegetation. Based on the site conditions, approximately 4.42 acres of CCC jurisdiction is located within the boundaries of the study area. Of these 4.42 acres, **1.86** acres will be impacted as a result of the proposed restoration activities.

Section 7 Regulatory Approval Process

The following is a summary of the various permits, agreements, and certifications required before construction activities take place within the jurisdictional areas.

7.1 U.S. ARMY CORPS OF ENGINEERS

The Corps regulates discharges of dredged or fill materials into WoUS and wetlands pursuant to Section 404 of the CWA. A permit will be required from the Corps Regulatory Branch-Los Angeles District Office prior to commencement of any construction activities within the Corps delineated jurisdictional areas.

7.1.1 Section 404 Permit Identification

Nationwide Permit Process: Since project improvements permanently impact less than a 1/2-acre of Corps jurisdiction, authorization via Nationwide Permit (NWP) 27, *Aquatic Habitat Restoration, Establishment, and Enhancement Activities*, would be required prior to Corps jurisdictional impact (refer to Appendix B, for a summary of NWP 27). NWP processing time generally takes 4-6 months and involves a Pre-Application Field Meeting and submittal of a formal application. The application submittal typically includes environmental documentation (e.g., jurisdictional delineation, site plans, project purpose, location, duration, etc.), a Pre-Construction Notification (PCN); and consultations with other agencies (as needed). Prior to issuance of the Corps permit, a CWA Section 401 Water Quality Certification from the Regional Board must be obtained. At this time, no application fee is required for the Corps permit process.

7.1.2 Coastal Zone Management Consistency

Since the project site is located within the Coastal Zone, the Corps shall obtain from the applicant a certification that the proposed activity complies with and will be conducted in a manner that is consistent with the approved state Coastal Zone Management Plan (CZMP). Upon receipt of the certification, the Corps will forward a copy of the public notice (which will include the applicant's certification statement) to the CCC and request its concurrence or objection. If the CCC objects to the certification or issues a decision indicating that the proposed activity requires further review, the Corps shall not issue the permit until the CCC concurs with the certification statement. If the CCC fails to concur or object to a certification statement within six (6) months of the CCC's receipt of the certification statement, CCC concurrence with the certification statement shall be conclusively presumed. District engineers will seek agreements with the CCC that the agency's failure to provide comments

during the public notice comment period will be considered as a concurrence with the certification or waiver of the right to concur or non-concur.

Obtaining the Section 401 Water Quality Certification can result in substantial delays in issuing an Corps permit. To avoid unreasonable delays in Corps permit processing, the following actions are recommended. In cases where the Corps has finished its evaluation of a permit proposal and the only action remaining is the issuance of the Section 401 Certification, the Corps should send a provisional permit to the applicant. Sending a provisional permit completes the Corps action on the proposal and notifies the applicant of the need to obtain a Section 401 Certification from the appropriate State certifying agency before the Section 404 permit is valid. The provisional permit also places the only remaining action with the certifying agencies, properly focusing the applicant on the State.

7.2 REGIONAL WATER QUALITY CONTROL BOARD

The Regional Board regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control Act. The Regional Board's jurisdiction extends to all waters of the State (including SWANCC and Rapanos conditions) and to all WoUS (including wetlands). The following permits will be required prior to construction.

7.2.1 Section 401 Water Quality Certification

For a Corps 404 permit to be approved, a 401 Water Quality Certification from the Santa Ana Regional Board will be required. The Regional Board also requires that CEQA compliance be obtained prior to obtaining the 401 Certification.

Once an application has been deemed complete, the Regional Board has between 60 days and 1 year in which to make a decision. According to regulations of the Corps, the State has 60 days from the date of receipt of a valid request for water quality standards certification (33 CFR Section 325.2 (b) (1) (ii)). The Corps district engineer may specify a longer (up to one year) or shorter time, if he or she determines that a longer or shorter time is reasonable (33 CFR Section 325.2 (b) (1) (ii)). If processing and review of the 401 application will take more than 60 days, the Regional Board will request additional time from the Corps. Please note that even when an application has been deemed complete, the Regional Board has the option of denial without prejudice. This is not a reflection on the project, but a means to stop the clock until the required information has been received.

As required by 23 California Code of Regulations (CCR) § 3858 (a), the Regional Board is required to have a minimum 21-day public comment period before any action is taken on a 401 application. The period closes when the Regional Board acts on the 401 application.

The public comment period does not close after a certain number of days because proposed projects tend to change through the 401 process and the public is allowed to review and comment on the changed project. The public comment period starts as soon as an application has been received. Additionally, the Regional Board requires that water quality concerns related to urban storm water runoff be addressed. Any 401 Certification application submitted to the Regional Board should incorporate the use of Best Management Practices (BMPs) for the treatment of pollutants carried by storm water runoff in order to be considered a complete application. The Regional Board also requires a 401 Certification Application Fee, which is dependent on the amount and type of impacts.

7.3 CALIFORNIA DEPARTMENT OF FISH AND GAME

The on-site drainage (streambed) and associated riparian vegetation would be considered jurisdictional by the CDFG; therefore, a 1602 SAA must be obtained prior to any jurisdictional impact. A SAA is technically not a permit. It is a legally binding contract in which two parties, the project proponent (applicant) and the CDFG, mutually agree to a particular course of action. The CDFG does not have the discretionary authority to decide not to negotiate a SAA or submit to binding arbitration. However, the CDFG has the duty to propose avoidance or mitigation measures which limit the project as necessary to prevent adverse impacts to fish and wildlife resources.

Upon a formal notification, the CDFG will determine whether the notification package (application) is complete. The CDFG will make this determination within 30 calendar days of receiving the notification package if the application is for a regular agreement (i.e., an agreement for a term of five years or less). However, the 30-day time period does not apply to notifications for long-term agreements (i.e., agreements for a term greater than five years). Once the notification package is deemed complete, the CDFG will process a Draft SAA as described below.

If a SAA is required, the CDFG may require an onsite inspection, and a draft agreement. The draft agreement will include measures to protect fish and wildlife resources while conducting the project. For regular agreements, the CDFG will submit a draft agreement to the applicant within sixty calendar days after the notification is deemed complete. Again, the 60-day time period does not apply to notifications for long-term agreements, since these are often large or complex projects.

The applicant then has 30 calendar days to notify the CDFG whether the measures in the draft agreement are acceptable. After the CDFG receives the signed draft agreement, it will make it final by signing it. The CDFG Application Fee associated with the notification

package varies and is dependent upon the total cost of the project and type of Agreement (i.e., Regular or Long-Term).

7.4 CALIFORNIA COASTAL COMMISSION

Although a NWP is required from the Corps, the CCC has identified that that NWP program is inconsistent with the California Coastal Management Program (CCMP). Therefore, the CCC requires permittees for NWPs to either receive a concurrence or waiver of consistency certification from the CCC before the NWP is validated. Pursuant to the CCMP, a CDP issued by the CCC functions as a consistency certification.

According to the latest design plans and environmental analysis, a CDP is required from the CCC prior to approval of the project. The purpose of the CDP is to ensure consistency with the Local Coastal Program. Issuance of a CDP requires compliance with Chapter 3 of the Coastal Act, Coastal Resources Planning and Management Policies, which outlines the policies/standards by which the permissibility of proposed development are determined.

7.5 GLOBAL RECOMMENDATIONS

7.5.1 Agency Concurrence and Pre-Application Field Meeting

It is highly recommended that the delineation be forwarded to each of the regulatory agencies for their concurrence. Once the delineation is approved, RBF has found it extremely beneficial and pro-active to have an on-site meeting with the Corps, Regional Board, CDFG, and CCC to discuss potential permitting strategies and mitigation opportunities (if any). In short, these Pre-Application Field Meetings often help streamline the permitting process.

7.5.2 Concurrent Permit Processing

Prior to issuance of the Corps permit, a Section 401 Water Quality Certification from the Santa Ana Regional Board and a CDP from the CCC must be obtained. Obtaining the Certification and CDP can result in substantial delays in issuing an Corps permit. To avoid unreasonable delays in Corps permit processing, the following actions are recommended. In cases where the Corps has finished its evaluation of a permit proposal and the only action remaining is the issuance of the Section 401 Certification and CDP, the Corps should send a provisional permit to the applicant. Sending a provisional permit completes the Corps action on the proposal and notifies the applicant of the need to obtain a Section 401 Certification and a CDP from the appropriate State certifying agency before the Section 404 permit is valid. The provisional permit also places the only remaining action with the certifying agencies, properly focusing the applicant on the State.

Section 8 References

The following references were utilized during preparation of this Delineation of State and Federal Jurisdictional Waters:

California Department of Fish and Game, *A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607,* January 1994.

California Department of Fish and Game, Lake and Streambed Alteration Program, http://www.dfg.ca.gov/1600/index.html.

California Regional Water Quality Control Board, Santa Ana Region Region, Water Quality Control Plan, 1995.

City of Newport Beach General Plan, adopted July 25, 2006.
http://www.city.newport-beach.ca.us/PLN/Planning.html

Eagle Aerial, Aerial Photograph, 2007.

Faber, Phyllis M., and Robert F. Holland, *Common Riparian Plants of California,* Pickleweed Press, 1996.

Faber, Phyllis M., *Common Wetland Plants of Coastal California,* Pickleweed Press, 1996.

Munsell, *Soil Color Charts*, 1994.

Natural Resources Conservation Services, *Hydric Soils List of California*, 1995. http://soils.usda.gov/soil_use/hydric/main.htm.

Site Visit conducted on March 6, 2007.

State Water Resources Control Board, *Effect of SWANCC v. United States on the 401 Certification Program*, January 25, 2001.

Thomas Brothers Map, Los Angeles and Orange Counties, 2008.

U.S. Army Corps of Engineers, *Final Summary Report: Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest*, June 2001.

U.S. Army Corps of Engineers, *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region,* 2006.

U.S. Army Corps of Engineers, Los Angeles District Regulatory Program, http://www.spl.usace.army.mil/.

U.S. Army Corps of Engineers, Regional Guidance Letter, *Practices for Documenting Jurisdiction under Section 404 of the CWA*, June 5, 2007.

U.S. Army Corps of Engineers, *Wetland Delineation Manual*, 1987.

U.S. Department of Agriculture, Natural Resources Conservation Service, Orange County and Western Part of Riverside County, California Soil Survey, 1978.

U.S. Department of Homeland Security, Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Map No. 06059C0403H, dated February 18, 2004. http://msc.fema.gov.

U.S. Fish and Wildlife Service, Department of Habitat and Resource Conservation, Wetland Geodatabase, http://wetlandsfws.er.usgs.gov/NWI/index.html.

U.S. Fish and Wildlife Service, *National List of Vascular Plant Species that Occur in Wetlands*, 1988.

U.S. Geological Survey, 7.5 Minute Series Topographic Quadrangle, Laguna Beach, CA, 1965, photorevised1981.

Appendix A Wetland Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Buck Gully Restoration City/County: Newport Beach / Orange Sampling Date: 3/6/07
Applicant/Owner: City of Newport Beach State: CA Sampling Point: 1/6
Investigator(s): L. See, W. Salter Section, Township, Range: Sec. 95, T. 7S, R. 9W, SBBM
Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR): LRR C, MLRA 19 Lat: 33°35'34" N Long: 117°51'57" W Datum: NAD 83
Soil Map Unit Name: Myford Sandy loam, 9-30% slopes, eroded NWI classification: PSSR
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	80	Yes	FACW
2.			
3.			
4.			
Total Cover:	80		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Oxalis corniculata	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	20		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 = ____	
FACW species 80	x 2 =	160
FAC species ____	x 3 = ____	
FACU species 20	x 4 =	80
UPL species ____	x 5 = ____	
Column Totals: 100 (A)		240 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: 1/6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2						Silt loam	
3-16	10YR 4/3						sand	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No X

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

Aerial photo

Remarks:

No hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Buck Gully Restoration City/County: Newport Beach/Orange Sampling Date: 3/6/07
Applicant/Owner: City of Newport Beach State: CA Sampling Point: 2/6
Investigator(s): L. See, W. Salter Section, Township, Range: Sec. 9S T. 7S, R. 9W, SBBM
Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR): LRR C, MLRA 19 Lat: 33° 35' 34" N Long: 117° 51' 57" W Datum: NAD83
Soil Map Unit Name: Myford sandy loam, 9-30% slopes, eroded NWI classification: PSSR
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	40	Yes	FACW
2.			
3.			
4.			
Total Cover:	40		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Pulicaria paludosa	10	No	UPL
2. Scirpus microcarpus	50	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 2|6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2						Silt loam	
2-16	10Y 3/1						Sandy loam	gleyed

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes X No ____ Depth (inches): 7.0

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 2.0

Wetland Hydrology Present? Yes X No ____

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

Aerial photo

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Buck Gully Restoration City/County: Newport Beach/Orange Sampling Date: 3/6/07
Applicant/Owner: City of Newport Beach State: CA Sampling Point: 3/6
Investigator(s): L. See, W. Salter Section, Township, Range: Sec 95 T.7S, R.9W, SBBM
Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR): LRR C, MLRA 19 Lat: 33°35'34" N Long: 117°51'57" W Datum: NAD83
Soil Map Unit Name: Myford sandy loam, 9-30% slopes, eroded NWI classification: PSSR
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	25	Yes	FACW
2.			
3.			
4.			
Total Cover:	25		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Typha domingensis	20	Yes	OBL
2. Paticana paludosa	5	No	UPL
3. Artemisia douglasiana	50	Yes	FACW
4.			
5.			
6.			
7.			
8.			
Total Cover:	75		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: 3/6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/3						sand	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- X Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes ____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No ____

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

Aerial photo

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Buck Gully Restoration City/County: Newport Beach / Orange Sampling Date: 3/6/07
Applicant/Owner: City of Newport Beach State: CA Sampling Point: 4/6
Investigator(s): L. See, W. Salter Section, Township, Range: Sec. 9S T. 7S, R. 9W, SBBM
Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR): LRR C, MLRA 19 Lat: 33° 35' 33" N Long: 117° 51' 59" W Datum: NAD 83
Soil Map Unit Name: Myford sandy loam, 9-30% slopes, eroded NWI classification: PSSR
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	20	Yes	FACW
2.			
3.			
4.			
Total Cover:	20		
Sapling/Shrub Stratum			
1. Toxicodendron diversilobum	60	Yes	UPL
2.			
3.			
4.			
5.			
Total Cover:	60		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 20	x 2 =	40
FAC species	x 3 =	
FACU species	x 4 =	
UPL species 60	x 5 =	300
Column Totals: 80 (A)		340 (B)

Prevalence Index = B/A = 5.66

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

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 4/6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/3						sand	
2-16	N2.5/0						sandy loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): ____

Water Table Present? Yes X No ____ Depth (inches): 6.0

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 4.0

Wetland Hydrology Present? Yes X No ____

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

Aerial Photo

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Buck Gully Restoration City/County: Newport Beach/Orange Sampling Date: 3/6/07
Applicant/Owner: City of Newport Beach State: CA Sampling Point: 5/6
Investigator(s): L. See, W. Salter Section, Township, Range: Sec. 95 T. 7S, R. 9W, SBBM
Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR): LRR C, MLRA 19 Lat: 33° 35' 30" N Long: 117° 52' 03" W Datum: NAD 83
Soil Map Unit Name: Myford Sandy loam, 9-30% slopes, eroded NWI classification: PSSR
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	90	Yes	FACW
2.			
3.			
4.			
Total Cover:	90		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: 5/6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/3						sand	
10-18	10Y 2.5/1						sandy loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No X

Remarks:

gleyed soil starts at 10" (not within 6")

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- X Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches): _____

Water Table Present? Yes X No ____ Depth (inches): 6.0

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 5.0

Wetland Hydrology Present? Yes X No ____

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

Aerial Photo

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Buck Gully Restoration City/County: Newport Beach/Orange Sampling Date: 3/6/07
Applicant/Owner: City of Newport Beach State: CA Sampling Point: 6/6
Investigator(s): L. See, W. Salter Section, Township, Range: Sec. 9S T. 7S, R. 9W, SBBM
Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 1
Subregion (LRR): LRR C, MLRA 19 Lat: 33°35'24"N Long: 117°52'016"W Datum: NAD83
Soil Map Unit Name: Myford sandy loam, 9-30% slopes, eroded NWI classification: PSSR
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Typha domingensis	100%	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover: 100			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

SOIL

Sampling Point: 6/16

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/3						sand	
2-16	N2.5/0						sandy loam	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (LRR C)
- ___ 1 cm Muck (A9) (LRR D)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR C)
- ___ 2 cm Muck (A10) (LRR B)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (Nonriverine)
- ___ Sediment Deposits (B2) (Nonriverine)
- ___ Drift Deposits (B3) (Nonriverine)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 0.5

Water Table Present? Yes X No ____ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): ____

Wetland Hydrology Present? Yes X No ____

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

Aerial photo

Remarks:

Appendix B NWP Summary

NWP 27. Aquatic Habitat Restoration, Establishment, and Enhancement Activities

Activities in waters of the United States associated with the restoration, enhancement, and establishment of tidal and non-tidal wetlands and riparian areas and the restoration and enhancement of nontidal streams and other non-tidal open waters, provided those activities result in net increases in aquatic resource functions and services.

To the extent that a Corps permit is required, activities authorized by this NWP include, but are not limited to: the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms; the installation of current deflectors; the enhancement, restoration, or establishment of riffle and pool stream structure; the placement of in-stream habitat structures; modifications of the stream bed and/or banks to restore or establish stream meanders; the backfilling of artificial channels and drainage ditches; the removal of existing drainage structures; the construction of small nesting islands; the construction of open water areas; the construction of oyster habitat over unvegetated bottom in tidal waters; shellfish seeding; activities needed to reestablish vegetation, including plowing or discing for seed bed preparation and the planting of appropriate wetland species; mechanized land clearing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities. Only native plant species should be planted at the site.

This NWP authorizes the relocation of non-tidal waters, including non-tidal wetlands and streams; on the project site provided there are net increases in aquatic resource functions and services.

Except for the relocation of non-tidal waters on the project site, this NWP does not authorize the conversion of a stream or natural wetlands to another aquatic habitat type (e.g., stream to wetland or vice versa) or uplands. This NWP does not authorize stream channelization. This NWP does not authorize the relocation of tidal waters or the conversion of tidal waters, including tidal wetlands, to other aquatic uses, such as the conversion of tidal wetlands into open water impoundments.

Reversion. For enhancement, restoration, and establishment activities conducted: (1) In accordance with the terms and conditions of a binding wetland enhancement, restoration, or establishment agreement between the landowner and the U.S. Fish and Wildlife Service (FWS), the Natural Resources Conservation Service (NRCS), the Farm Service Agency (FSA), the National Marine Fisheries Service (NMFS), the National Ocean Service (NOS), or their designated state cooperating agencies; (2) as voluntary wetland restoration, enhancement, and establishment actions documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or (3) on reclaimed surface coal mine lands, in accordance with a Surface Mining Control and Reclamation Act permit issued by the OSM or the applicable state agency, this NWP also authorizes any future discharge of dredged or fill material associated with the reversion of the area to its documented prior condition and use (i.e., prior to the restoration, enhancement, or establishment activities). The reversion must occur within five years after expiration of a limited term wetland restoration or establishment agreement or permit, and is authorized in these circumstances even if the discharge occurs after this NWP expires. The five year reversion limit does not apply to agreements without time limits reached between the landowner and the FWS, NRCS, FSA, NMFS, NOS, or an appropriate state cooperating agency. This NWP also authorizes discharges of dredged or fill

material in waters of the United States for the reversion of wetlands that were restored, enhanced, or established on prior-converted cropland that has not been abandoned or on uplands, in accordance with a binding agreement between the landowner and NRCS, FSA, FWS, or their designated state cooperating agencies (even though the restoration, enhancement, or establishment activity did not require a section 404 permit). The prior condition will be documented in the original agreement or permit, and the determination of return to prior conditions will be made by the Federal agency or appropriate state agency executing the agreement or permit. Before conducting any reversion activity the permittee or the appropriate Federal or state agency must notify the district engineer and include the documentation of the prior condition. Once an area has reverted to its prior physical condition, it will be subject to whatever the Corps Regulatory requirements are applicable to that type of land at the time. The requirement that the activity result in a net increase in aquatic resource functions and services does not apply to reversion activities meeting the above conditions. Except for the activities described above, this NWP does not authorize any future discharge of dredged or fill material associated with the reversion of the area to its prior condition. In such cases a separate permit would be required for any reversion.

Reporting: For those activities that do not require pre-construction notification, the permittee must submit to the district engineer a copy of: (1) The binding wetland enhancement, restoration, or establishment agreement, or a project description, including project plans and location map; (2) the NRCS or USDA Technical Service Provider documentation for the voluntary wetland restoration, enhancement, or establishment action; or (3) the SMCRA permit issued by OSM or the applicable state agency. These documents must be submitted to the district engineer at least 30 days prior to commencing activities in waters of the United States authorized by this NWP.

Notification. The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 27), except for the following activities:

(1) Activities conducted on non-Federal public lands and private lands, in accordance with the terms and conditions of a binding wetland enhancement, restoration, or establishment agreement between the landowner and the U.S. FWS, NRCS, FSA, NMFS, NOS, or their designated state cooperating agencies;

(2) Voluntary wetland restoration, enhancement, and establishment actions documented by the NRCS or USDA Technical Service Provider pursuant to NRCS Field Office Technical Guide standards; or

(3) The reclamation of surface coal mine lands, in accordance with an SMCRA permit issued by the OSM or the applicable state agency.

However, the permittee must submit a copy of the appropriate documentation. (Sections 10 and 404)

Note: This NWP can be used to authorize compensatory mitigation projects, including mitigation banks and in-lieu fee programs. However, this NWP does not authorize the reversion of an area used for a compensatory mitigation project to its prior condition, since compensatory mitigation is generally intended to be permanent.