

**National Wetlands Inventory Map Report
For
Region 10 (San Diego County), California**

Project ID: R01Y07P10_So_CA_grant_area_10

Project Area:

San Diego NW

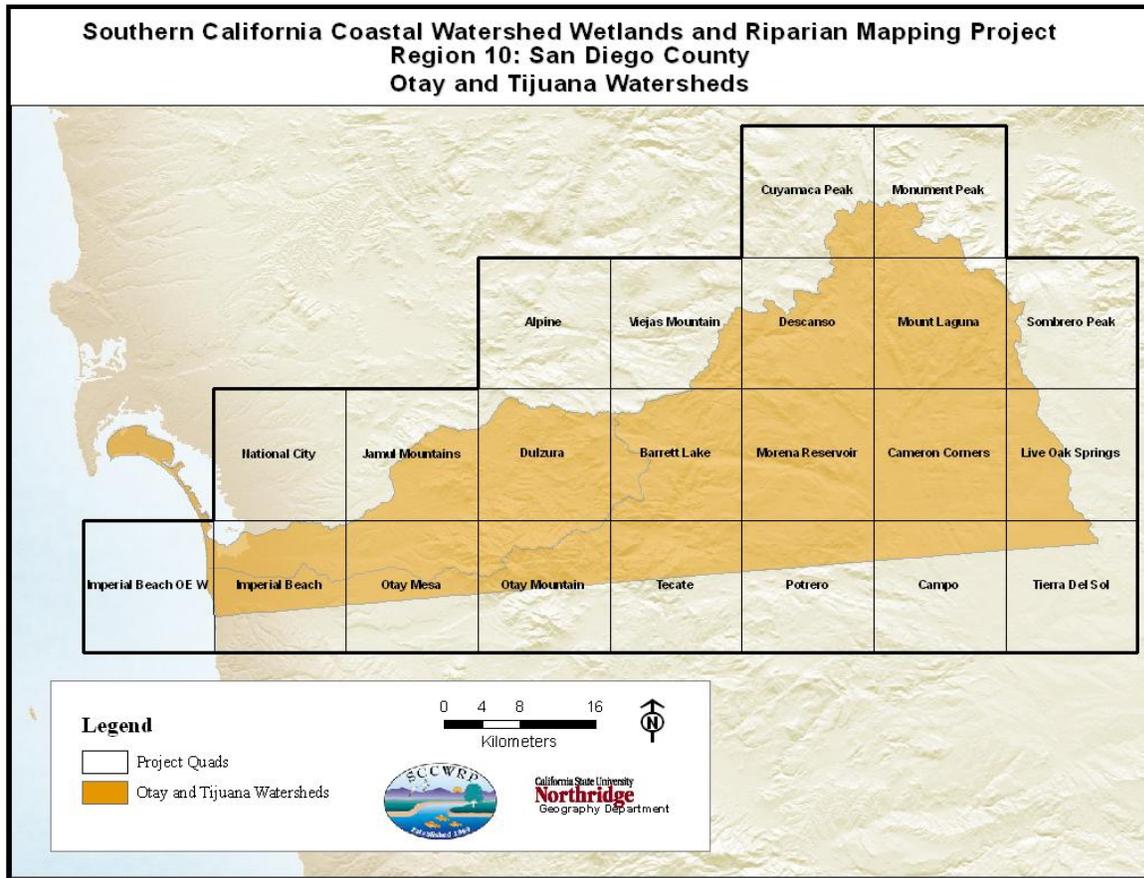
Imperial Beach
Imperial Beach OE W
National City

San Diego NE

Alpine
Barrett Lake
Cameron Corners
Campo
Cuyamaca Peak*
Descanso
Dulzura
Jamul Mountains
Live Oak Springs*
Monument Peak*
Morena Reservoir
Mount Laguna
Otay Mesa
Otay Mountain
Potrero
Sombrero Peak*
Tecate
Tierra Del Sol*
Viejas Mountain

* Quads with the asterisk were only mapped up to the *South Coast* watershed boundary and not beyond. See Figure 1.

Figure 1



Source Imagery:

For all quads listed (San Diego, California):

Identification_Information:

Citation:

Citation_Information:

Originator: USDA-FSA Aerial Photography Field Office

Title: Index of source acquisition dates.

Publication_Date: 20060324

Edition: Version

Geospatial_Data_Presentation_Form: vector digital data

Publication_Information:

Publication_Place: Salt Lake City, Utah

Publisher: USDA-FSA Aerial Photography Field Office

Description:

Abstract:

This data set contains lines and/or polygons delineating the boundary between DOQQ imagery used in the creation of a compressed county mosaic (CCM). The DOQQ and CCM products were created from imagery acquired in the National Agriculture Imagery Program (NAIP). These boundary lines can be used as a tool in determining the image source and date of each portion of the CCM. The boundary lines separating each DOQQ may be the actual seam line location or an approximation. This is because the various vendors acquiring and processing the data use different algorithms to create the DOQQ and CCM products. Since the seam line may be an approximation, portions of the CCM along the boundary may actually come from the imagery on the other side of the seam line.

The NAIP acquires digital ortho imagery during the agricultural growing seasons in the continental U.S.. A primary goal of the NAIP program is to enable availability of ortho imagery within a year of acquisition. NAIP provides two main products: 1 meter ground sample distance (GSD) ortho imagery rectified to a horizontal accuracy of within +/- 3 meters of reference digital ortho quarter quads (DOQQ's) from the National Digital Ortho Program (NDOP); and, 2 meter GSD ortho imagery rectified to within +/- 10 meters of reference DOQQs. The tiling format of NAIP imagery is based on a 3.75' x 3.75' quarter quadrangle with a 300 meter buffer on all four sides. NAIP quarter quads are formatted to the UTM coordinate system using NAD83. NAIP imagery may contain as much as 10% cloud cover per tile.

Purpose:

This index will aid USDA Service Centers in identifying and delineating source acquisition date boundaries for the compressed county mosaic as they administer USDA programs

for their customers.

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 20060324

Currentness_Reference: ESRI shapefile creation date.

Status:

Progress: Complete

Collateral Data:

- USGS 1:24,000 topographic quadrangles
- USGS Digital Raster Graphics
- USGS - NHD – National Hydrography Dataset
- Microsoft Virtual Earth Online
- Google Earth Online
- National Wetlands Inventory Polygons (2006)
- Vernal Pool Dataset—US Army Corps of Engineers
- Otay River Dataset—US Army Corps of Engineers
- Vegetation Data – LCMMP – CA Dept of Forestry and Fire (2005)
- NAPP, CIR, aerial photography (date: mm-dd-yyyy)
- Alpine: NE, SE (06-04-1996), NW, SW (06-04-1996)
- Barrett Lake: NW, NE, SE, SW (06-04-1996)
- Cameron Corners: NW, SW (06-04-1996), NE, SE (09-27-1996)
- Campo: NW (06-04-1996), NE (09-17-1996)
- Cuyamaca Peak: NW, NE, SE, SW (06-04-1996)
- Descanso: NW, NE, SE, SW (06-04-1996)
- Dulzura: NW, NE, SE, SW (06-04-1996)
- Imperial Beach: NE, SE (09-30-1996), NW, SW (10-10-1996)
- Imperial Beach OE W: NE, SE (10-10-1996)
- Jamul Mountains: NW, NE, SE, SW (09-26-1996)
- Live Oak Springs: NW, SW (09-27-1996), NE, SE (09-26-1996)
- Monument Peak: NW, SW (09-26-1996), NE, SE (09-27-1996)
- Morena Reservoir: NW, NE, SE, SW (06-04-1996)
- Mount Laguna: NW, SW (06-04-1996), NE, SE (09-27-1996)
- National City: NW, SW (10-10-1996), NE, SE (09-30-1996)
- Otay Mesa: NW, SW (09-30-1996), NE, SE (06-4-1996)
- Otay Mountain: NW, NE, SE, SW (06-04-1996)
- Portrero: NW, NE (06-04-1996)
- Sombrero Peak: NW, NE, SE, SW (09-26-1996)
- Tecate: NW, NE (06-04-1996)
- Tierra del Sol: NW (09-27-1996), NE (09-26-1996)
- Viejas Mountain: NW, SW (06-04-1996), NE, SE (06-24-1996)

Collateral Reports:

Inventory Method:

The delineations were done “heads-up” in ESRI ArcGIS 9.x ArcInfo software on above mentioned sources of ortho-rectified CIR and Natural Color Imagery (1- meter ground resolution). The date and time of year the imagery was acquired is listed above under the Source Imagery Heading. Collateral aerial photography (NAPP, CIR, 1987, 2002, 2003 1:40,000 scale) was used on a 4X mirror stereoscope for stereoscopic interpretation.

Field reconnaissance was conducted on from July 10th – 12th 2007. The purpose of the field work was to correlate varying signatures found on the photography to actual ground conditions, and the verify delineations and classifications of the more complex wetlands. Vegetation, soils, and hydrologic conditions were examined at field sites. GPS locations and photos were collected at all sites visited.

Data Limitations:

The user of the map is cautioned that, due to the limitation of mapping primarily through aerial photo interpretation, a small percentage of wetlands may have gone unidentified. Since the photography was taken during a particular time and season, there may be discrepancies between the map and current field conditions. Changes in landscape which occurred after the photography was taken would result in such discrepancies. Aerial photo interpretation and heads-up mapping were completed at the Center for Geographic Studies of California State University Northridge, by Center students and staff. Data were reviewed for quality control by USFWS Pacific Southwest Region NWI Staff.

Classification:

The wetland classifications that appear in Region 10 are in accordance with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979).

General Description of the Project Area:

(Based on the ecological subregion description:
<http://www.fs.fed.us/r5/projects/ecoregions/261bj.htm> and
<http://www.fs.fed.us/r5/projects/ecoregions/261bi.htm>)

The project area lies within San Diego County and encompasses 22 1:24,000 USGS quadrangles scattered throughout the Otay and Tijuana watersheds. The area includes from west to east, Coastal San Diego and the higher mountains of the Peninsular Ranges.

The Otay River watershed encompasses approximately 160 square miles in southwest San Diego County and is one of the three hydrologic units that discharge to San Diego Bay. The watershed consists largely of unincorporated area, but also includes portions of the cities of Chula Vista, Imperial Beach, Coronado, National City, and San Diego. The predominant land uses in the watershed are open space (67%) and urban/residential (20%). The major inland hydrologic features, Upper and Lower Otay Lakes, are two water supply reservoirs that also provide important habitat and recreational opportunities. Approximately 36 square miles of the watershed is part of the Multiple Species Conservation Plan effort that provides habitat for a wide range of endangered plant and animal species. Other important conservation areas within the watershed include the San Diego National Wildlife Refuge, the Rancho Jamul Ecological Reserve, and the vernal pool lands in the region.

The Tijuana River watershed encompasses a region of approximately 1,750 square miles on either side of the California – Baja California border, and in terms of water quality degradation is probably the most severely impacted watershed in San Diego County. Although only 27% of the watershed area is within California, the river discharges to the Tijuana Estuary and Pacific Ocean on the U.S. side of the international border. On the U.S. side of the border, the cities of Imperial Beach and San Diego, and San Diego County have portions of their jurisdictions within the watershed. The cities of Tijuana and Tecate are the most important urban centers on the Mexican side. The current population of the entire watershed is approximately one million people.

The Tijuana River watershed is classified as a Category I (impaired) watershed by the State Water Resources Control Board due to a wide variety of water quality problems. These problems are largely a result of non-point agricultural sources on the U.S. side of the border and a large variety of point and non-point sources on the Mexican side. The Tijuana Estuary, a National Estuarine Sanctuary that supports a variety of threatened and endangered plants and animals, is threatened by inflows from the Tijuana River containing high concentrations of coliform bacteria, sediment, trace metals (copper, lead, zinc, chromium, nickel, and cadmium), PCBs, and other urban, agricultural, and industrial pollutants.

Elevation ranges from sea-level up to 6512 feet on Cuyamaca Peak.

Along the coast, the predominant natural plant communities are Coast live oak series in areas with thermic soil temperature regimes, Big-cone Douglas-fir - canyon live oak series in areas with mesic soil temperature regimes, Chamise series on shallow soils, and Mixed chaparral shrublands. There are smaller areas of Purple sage series, Bigpod ceanothus series, and Mixed scrub oak series. The dunes and adjacent uplands with a cover of eolian sand support a succession of plant communities, from bare dune through herbaceous communities and Coyote bush series to California sagebrush series on stabilized dunes. Inland, predominant potential natural communities includes Mixed chaparral shrublands, Chamise series, Canyon live oak series, Coast live oak series, Ponderosa pine series, Jeffrey pine series, White fir series and Lodgepole pine series.

Coastally, the mean annual precipitation is about 10 to 12 inches. Summer fog is common. Mean annual temperature is about 58° to 62° F. The mean freeze-free period is about 350 to 365 days. Inland, the mean annual precipitation is about 18 to 40 inches; most of it is rain. Mean annual temperature is about 50° to 58° F. The mean freeze-free period is about 200 to 250 days.

Description of attribute values:

WETLAND ATTRIBUTE	DESCRIPTION
E1UBL	Permanently flooded deepwater tidal habitat with low energy and variable salinity, influenced and often semi-enclosed by land.
E1UBLh	Permanently flooded deepwater tidal habitat with low energy and variable salinity, influenced and often semi-enclosed by land and created by an impoundment.
E1UBLx	Permanently flooded deepwater tidal habitat with low energy and variable salinity, influenced and often semi-enclosed by land created by an excavation.
E2EMN	Regularly flooded, intertidal salt marsh characterized by erect, rooted, herbaceous hydrophytes.
E2EMNh	Regularly flooded, intertidal salt marsh characterized by erect, rooted, herbaceous hydrophytes created by an impoundment.
E2EMNx	Regularly flooded, intertidal salt marsh characterized by erect, rooted, herbaceous hydrophytes created by an excavation.
E2EMP	Irregularly flooded, intertidal salt marsh characterized by erect, rooted, herbaceous hydrophytes.
E2EMPh	Irregularly flooded, intertidal salt marsh characterized by erect, rooted, herbaceous hydrophytes created by an impoundment.
E2EMPx	Irregularly flooded, intertidal salt marsh characterized by erect, rooted, herbaceous hydrophytes created by an excavation.
E2SBN	Regularly flooded, intertidal channel beds.
E2SBNx	Regularly flooded, intertidal channel beds created by an excavation.
E2USN	Regularly flooded, intertidal flat with less than 30 percent vegetative cover.
E2USNh	Regularly flooded, intertidal flat with less than 30 percent vegetative cover created by an impoundment.
E2USP	Irregularly flooded, intertidal flat with less than 30 percent vegetative cover.

E2USPh	Irregularly flooded, intertidal flat with less than 30 percent vegetative cover created by an impoundment.
E2USPx	Irregularly flooded, intertidal flat with less than 30 percent vegetative cover created by an excavation.
L1UBHh	Permanently flooded, deepwater habitat greater than 20 acres in size that is created by an impoundment (e.g., reservoir).
L2EM2Ch	Seasonally flooded Lacustrine fringe wetland characterized by erect, rooted, herbaceous hydrophytes. Wetland supported or created by an impoundment (e.g., reservoir fringe)
L2UBF	Semi-permanently flooded, open water habitat extending from the shoreward boundary to a depth of 2 meters.
L2USC	Seasonally flooded Lacustrine fringe unvegetated wetland characterized by less than 30 percent cover of erect, rooted, herbaceous hydrophytes.
L2USCh	Seasonally flooded Lacustrine fringe unvegetated wetland characterized by less than 30 percent cover of erect, rooted, herbaceous hydrophytes. Wetland supported or created by an impoundment (e.g., reservoir fringe)
M1UBL	Permanently flooded, open ocean deepwater habitat.
M2USN	Regularly flooded, high energy marine beaches and bars, with less than 30 percent vegetative cover.
M2USP	Irregularly flooded, high energy marine beaches and bars, with less than 30 percent vegetative cover.
PABCh	Seasonally flooded depressions and floodplains characterized by a matrix of aquatic beds (e.g. pondweed) created by the construction of an impoundment.
PABCx	Seasonally flooded ponds vegetated with aquatic beds (e.g., pondweed or algae) created by an excavation.
PABFh	Semi-permanently flooded depressions and floodplains vegetated with aquatic beds (e.g., pondweed or algae) and created by the construction of an impoundment.
PABFx	Semi-permanently flooded depressions and floodplains characterized by a matrix of aquatic beds (e.g. pondweed) and herbaceous vegetation created by an excavation.
PABH	Permanently flooded depressions and floodplains characterized by a matrix of aquatic beds (e.g. pondweed) and herbaceous vegetation

PABHh	Permanently flooded depressions and floodplains vegetated with aquatic beds (e.g. pondweed or algae) and created by the construction of an impoundment.
PABHx	Permanently flooded depressions and floodplains vegetated with aquatic beds (e.g. pondweed or algae) created by an excavation.
PEM/SSA	Temporarily flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation.
PEM/SSAh	Temporarily flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation created by the construction of an impoundment.
PEM/SSAx	Temporarily flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation created by an excavation.
PEM/SSB	Saturated wetland consisting of a matrix of herbaceous and scrub-shrub vegetation usually associated with springs.
PEM/SSC	Seasonally flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation.
PEM/SSCh	Seasonally flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation created by the construction of an impoundment.
PEM/SSCx	Seasonally flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation created by an excavation.
PEM/USC	Seasonally flooded depressions and floodplains characterized by a mixture of herbaceous vegetation and unconsolidated substrate.
PEM/USCh	Seasonally flooded depressions and floodplains characterized by a mixture of herbaceous vegetation and unconsolidated substrate created by the construction of an impoundment.
PEMA	Temporarily flooded wetlands dominated by herbaceous vegetation.
PEMAf	Temporarily flooded depressions and floodplains currently being farmed, but would otherwise support hydrophytes if farming is discontinued.
PEMAh	Temporarily flooded wetlands dominated by herbaceous vegetation created by the construction of an impoundment.
PEMAx	Temporarily flooded wetlands dominated by herbaceous vegetation created by an excavation.

PEMB	Wetlands dominated by herbaceous vegetation in depressions or below springs where the water table is usually at or near the surface.
PEMBh	Wetlands dominated by herbaceous vegetation in depressions or below springs where the water table is usually at or near the surface and is maintained by the construction of an impoundment.
PEMBx	Wetlands dominated by herbaceous vegetation in depressions or below springs where the water table is usually at or near the surface created by an excavation.
PEMC	Seasonally flooded wetlands dominated by herbaceous vegetation.
PEMCf	Seasonally flooded depressions and floodplains currently being farmed, but would otherwise support hydrophytes if farming is discontinued.
PEMCh	Seasonally flooded wetlands dominated by herbaceous vegetation created by the construction of an impoundment.
PEMCx	Seasonally flooded wetlands dominated by herbaceous vegetation created by an excavation.
PEMF	Semi-permanently flooded depressions dominated by herbaceous vegetation.
PEMFh	Semi-permanently flooded depressions dominated by herbaceous vegetation and created by the construction of an impoundment.
PEMFx	Semi-permanently flooded depressions dominated by herbaceous vegetation created by an excavation.
PEMHh	Permanently flooded depressions dominated by herbaceous vegetation and created by the construction of an impoundment.
PEMHx	Permanently flooded depressions dominated by herbaceous vegetation created by an excavation.
PEMJ	Intermittently flooded depressions dominated by herbaceous vegetation.
PEMR	Seasonally flooded, freshwater tidal floodplains and banks that are dominated by herbaceous vegetation.
PEMRh	Seasonally flooded, freshwater tidal floodplains and banks that are dominated by herbaceous vegetation and created by the construction of an impoundment.
PEMS	Temporarily flooded, freshwater tidal floodplains and banks dominated by herbaceous vegetation.
PEMV	Permanently flooded freshwater tidal floodplains and banks dominated by herbaceous vegetation.
PFO/EMC	Seasonally flooded depressions, riverine banks and floodplains characterized by a matrix of forested and herbaceous vegetation.

PFO/SSA	Temporarily flooded depressions, riverine banks and floodplains characterized by a matrix of forested and scrub-shrub vegetation.
PFO/SSAh	Temporarily flooded depressions, riverine banks and floodplains characterized by a matrix of forested and scrub-shrub vegetation created by an impoundment.
PFO/SSC	Seasonally flooded depressions, riverine banks and floodplains characterized by a matrix of forested and scrub-shrub vegetation.
PFO/SSCh	Seasonally flooded depressions, riverine banks and floodplains characterized by a matrix of forested and scrub-shrub vegetation created by an impoundment.
PFO/SSCx	Seasonally flooded depressions, riverine banks and floodplains characterized by a matrix of forested and scrub-shrub vegetation created by an excavation.
PFO/SSF	Semi- permanently flooded depressions, riverine banks and floodplains characterized by a matrix of forested and scrub-shrub vegetation.
PFO/SSJ	Intermittently flooded depressions, riverine banks and floodplains characterized by a matrix of forested and scrub-shrub vegetation.
PFO/USA	Temporarily flooded depressions and floodplains characterized by a matrix of sparse forested vegetation and unconsolidated substrate.
PFO/USC	Seasonally flooded depressions and floodplains characterized by a matrix of sparse forested vegetation and unconsolidated substrate.
PFOA	Temporarily flooded depressions and floodplains dominated by forested vegetation.
PFOB	Saturated forested wetland usually associated with springs. Common tree species include willow and cottonwood.
PFOC	Seasonally flooded depressions and floodplains dominated by forested vegetation.
PFOCh	Seasonally flooded depressions and floodplains dominated by forested vegetation and created by the construction of an impoundment.
PFOCx	Seasonally flooded depressions and floodplains dominated by forested vegetation created by an excavation.
PFOJ	Intermittently flooded depressions, riverine banks and floodplains characterized dominated by forested vegetation.
PSS/EMA	Temporarily flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation.

PSS/EMAh	Temporarily flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation and created by an impoundment.
PSS/EMB	Saturated wetland consisting of a matrix of scrub-shrub and herbaceous vegetation usually associated with springs.
PSS/EMC	Seasonally flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation.
PSS/EMCh	Seasonally flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation and created by the construction of an impoundment.
PSS/EMCx	Seasonally flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation created by an excavation.
PSS/EMF	Semi-permanently flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation.
PSS/EMFh	Semi-permanently flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation created by an impoundment.
PSS/FOA	Temporarily flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation.
PSS/FOAh	Temporarily flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation created by an impoundment.
PSS/FOC	Seasonally flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation.
PSS/FOCh	Seasonally flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation created by an impoundment.
PSS/FOCx	Seasonally flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation created by an excavation.
PSS/USA	Temporarily flooded depressions and floodplains characterized by a matrix of sparse scrub-shrub vegetation and unconsolidated substrate.
PSS/USC	Seasonally flooded depressions and floodplains characterized by a matrix of sparse scrub-shrub vegetation and unconsolidated substrate.
PSS/USJ	Intermittently flooded depressions and floodplains characterized by a matrix of sparse scrub-shrub vegetation and unconsolidated substrate.

PSSA	Temporarily flooded scrub-shrub wetland usually located in drainages.
PSSAh	Temporarily flooded scrub-shrub wetland usually located in drainages and created by the construction of an impoundment.
PSSAx	Temporarily flooded scrub-shrub wetland usually located in drainages and created by an excavation.
PSSB	Saturated scrub-shrub wetland usually associated with springs.
PSSBh	Saturated scrub-shrub wetland usually associated with springs and created by an impoundment.
PSSC	Seasonally flooded scrub-shrub wetland usually located in drainages.
PSSCh	Seasonally flooded scrub-shrub wetland usually located in drainages and created by an impoundment.
PSSCx	Seasonally flooded scrub-shrub wetland usually located in drainages and created by an excavation.
PSSJ	Intermittently flooded scrub-shrub wetland usually located in drainages.
PSSKx	Artificially flooded scrub-shrub wetland created by an excavation.
PSSR	Seasonally flooded, freshwater tidal floodplains and banks that are dominated by scrub-shrub vegetation.
PSSRh	Seasonally flooded, freshwater tidal floodplains and banks that are dominated by scrub-shrub vegetation and created by the construction of an impoundment.
PSSS	Temporarily flooded, freshwater tidal floodplains and banks that are dominated by scrub-shrub vegetation.
PUB/ABFh	Semi-permanently flooded ponds with partial aquatic bed coverage and created by the construction of an impoundment.
PUB/ABHh	Permanently flooded ponds with partial aquatic bed coverage and created by the construction of an impoundment.
PUBF	Semi-permanently flooded ponds.
PUBFh	Semi-permanently flooded ponds created by the construction of an impoundment (e.g. stock ponds).
PUBFx	Semi-permanently flooded ponds created by an excavation (e.g. agriculture ponds and sediment basins).
PUBHh	Permanently flooded pond created behind an impoundment.
PUBHx	Permanently flooded pond created by excavation.
PUBKr	Artificially flooded pond with an artificial substrate (e.g., sewage detention pond).

PUBKx	Artificially flooded pond (e.g., sewage detention pond).
PUS/EMAx	Temporarily flooded basins with some herbaceous vegetation created by an excavation.
PUS/EMC	Seasonally flooded basins with a matrix of unconsolidated substrate and herbaceous vegetation.
PUS/SSA	Temporarily flooded depressions and floodplains characterized by unconsolidated substrate and some scrub-shrub vegetation.
PUS/SSC	Seasonally flooded depressions and floodplains characterized by unconsolidated substrate and some scrub-shrub vegetation.
PUSA	Temporarily flooded depressions and floodplains with little or no vegetation.
PUSAh	Temporarily flooded depressions and floodplains with little or no vegetation and created by the construction of an impoundment.
PUSAx	Temporarily flooded basins with little or no vegetation created by an excavation.
PUSC	Seasonally flooded depressions and floodplains with little or no vegetation.
PUSCh	Seasonally flooded depressions and floodplains with little or no vegetation and created by the construction of an impoundment.
PUSCx	Seasonally flooded depressions and floodplains with little or no vegetation created by an excavation.
PUSR	Seasonally flooded freshwater tidal floodplains dominated by unconsolidated substrate.
R1UBV	Permanently flooded, tidally influenced riverine deepwater habitat.
R1UBVx	Permanently flooded, tidally influenced riverine deepwater habitat created by an excavation.
R2UBH	Permanently flowing lower perennial rivers.
R2UBHx	Permanently flowing lower perennial rivers or ditches created by an excavation.
R2USA	Temporarily flooded unconsolidated substrate associated with lower perennial riverine systems.
R2USC	Seasonally flooded unconsolidated substrate associated with lower perennial riverine systems.
R3USC	Seasonally flooded unconsolidated substrate associated with lower perennial riverine systems.
R3UBH	Permanently flowing upper perennial rivers.
R3USC	Seasonally flooded unconsolidated substrate associated with upper perennial riverine systems.
R4SBA	Temporarily flowing riverine channels.
R4SBC	Seasonally flowing riverine channels.
R4SBCr	Seasonally flowing riverine channels with artificial

	substrate created by an excavation.
R4SBCx	Seasonally flowing riverine channels created by an excavation (e.g., agricultural drainage ditches)
R4SBJ	Intermittently flowing riverine channels.
R4SBJx	Intermittently flowing riverine channels created by an excavation.

Description of Special Modifiers:

SPECIAL MODIFIER	DESCRIPTION
h	Diked/Impounded – Created or modified by a man-made barrier or dam which obstructs the inflow or outflow of water.
f	Farmed – The soil surface has been mechanically or physically altered for production of crops, but hydrophytes will become reestablished if farming is discontinued.
r	Artificial – Substrates classified as Rock Bottom, Unconsolidated Bottom, Rocky Shore and Unconsolidated Shore that were emplaced by man using natural or synthetic materials.
x	Excavated – Lies within a basin or channel excavated by man.

Partial list of wetland and riparian plant species observed in the project area with indicator status (USFWS 1988): Please see Appendix A.

Regional specialized conventions:

Linear features such as drainage channels, swales, streams, and artificial waterways are difficult to represent accurately. Mapping conventions have been developed through extensive fieldwork data collection to provide consistency with the representations of these habitats. A standard buffer width of 2.5 meters (for total feature width of 5.0 meters) is used on most linear features to provide some generalization of the width of the channel or swale. Channel width is modified for larger drainages and floodplains when the imagery allows for accurate interpretation. In forested areas where drainage channels are not clearly visible due to wetland and upland riparian canopy cover, the standard buffer width is used to depict the typical wetland bank vegetation of the project area. In most cases, this is defined as a mosaic of forest and scrub-shrub vegetation on the drainage banks. For more information, please see Project Standard Operating Procedure at: http://www.socalwetlands.com/website/Documents/SOP_SOCALPROJECT_050707.pdf.

Other discussion of mapping issues (image quality, water conditions, etc.):

This project used several sources and dates of ortho-rectified imagery to delineate wetland resources. Alignment issues always occur with multiple sources of imagery. In most cases, the delineations were created using the source imagery listed above, with no further retro-fitting to match other, often older, imagery sources. However, on few occasions, original delineations from the source imagery were retro-fitted to another source of imagery such as the CIR if deemed appropriate. Examples of this would include the seasonal fluctuations observed in large reservoirs or the additional detail CIR provides for delineating estuarine systems. For more information, please see Project Standard Operating Procedure at:

http://www.socalwetlands.com/website/Documents/SOP_SOCALPROJECT_050707.pdf.

References:

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. United States Department of the Interior, Fish and Wildlife Service, FWS/PBS 79/81, Washington, D.C.\

U.S. Fish and Wildlife Service. 1988. *National List of Plant Species that Occur in Wetlands: California (Region 0)*. United States Department of the Interior, Fish and Wildlife Service, Washington, D.C.