APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): May 2010

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: California Department of Transportation (Caltrans) District 5, South Coast HOV Project (SPL-2012-00557-TS)

C. PROJECT LOCATION AND BACKGROUND INFORMATION: See attached for coordinates

State: California County/parish/borough: Santa Barbara City: Carpinteria and Santa Barbara Center coordinates of site (lat/long in degree decimal format): Lat. ° **N**. Long. ° **W**.

Universal Transverse Mercator:

Name of nearest waterbody: From east to west: OW14, 15, 16, 17 and AC2 (Franklin Creek-Carpinteria); OW18, 21, 22, 23 (Santa Monica Creek-Carpinteria); OW29; OW34, 35, 36 (Arroyo Parida Creek-Carpinteria), OW43, 44 and AC16 (Toro Creek), OW 52, 54 (Greenwell Creek), OW69, 70 (Romero Creek), OW71, 72 (San Ysidro Creek), OW73, 74 (Oak Creek); see map sheets and enclosed table for locations and coordinates. The information provided in this form combines the areas/acres of potentially jurisdictional waters for each of the aforementioned creeks and the distance to the nearest TNW also applies to the combined data. Additional site specific detail is provided, where applicable. Estimates of tributary width/depth are also collective.

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Carpinteria Salt Marsh or the Pacific Ocean depending on location.

Name of watershed or Hydrologic Unit Code (HUC): 18060013

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: 09 August 2012

Field Determination. Date(s): Site visit wasconducted with Caltrans 08 May 2012.

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

Waters subject to the ebb and flow of the tide. Waters are presently used, or have been used in

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

- a. Indicate presence of waters of U.S. in review area (check all that apply): ¹
 - TNWs, including territorial seas
 - Wetlands adjacent to TNWs
 - Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 - Non-RPWs that flow directly or indirectly into TNWs
 - Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
 - Isolated (interstate or intrastate) waters, including isolated wetlands
- b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: linear feet: width (ft) and/or 0.52 acres. Wetlands: 0.04 acres.

c. Limits (boundaries) of jurisdiction based on: Not established at this time.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

 $^{^{2}}$ For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Elevation of established OHWM (if known):

2.

Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

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³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: acres

Drainage area: 53.3 square miles (this drainage area estimate encompasses the entire project reach from the south to the north end of the project) square miles

Average annual rainfall: 15-17 approx. inches Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) <u>Relationship with TNW:</u> Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are 1 (or less) river miles from TNW.
Project waters are Pick List river miles from RPW.
Project waters are 1 (or less) aerial (straight) miles from TNW.
Project waters are 1 (or less) aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: Direct.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Tributary stream order, if known:

(b) <u>General Tributary Characteristics (check all that apply):</u>

Tributary is: Natural

Artificial (man-made). Explain:

Manipulated (man-altered). Explain: All the creeks in the review area have been modified by the Department of Transportation or the local flood control district for the purpose of reducing flood hazards and maitaining public safety on US 101.

Tributary properties with respect to top of bank (estimate): Average width: 20 feet Average depth: 5 feet Average side slopes: 2:1.

Primary tributary substrate composition (check all that apply):

⊠ Silts	⊠ Sands
Cobbles	🖾 Gravel
Bedrock	□ Vegetation. Type/% cover:
Other. Explain:	•

Concrete

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Stable.

Presence of run/riffle/pool complexes. Explain: Runs/riffles/pool complexes occur in the upper reaches of some of the subject watersheds, but these physical features do not occur in the review area due to modifications by the Department of Transportation, City of Carpinteria, or the Santa Barbara County flood control district.

Tributary geometry: Meandering

Tributary gradient (approximate average slope): In the review area: <1 %

(c) Flow:

Tributary provides for: Seasonal flow

Estimate average number of flow events in review area/year: 2-5

Describe flow regime: Intermittent; the estimated average number of flow events in the review area per year are based on an average rainfall year.

Other information on duration and volume: Unknown.

Surface flow is: Discrete and confined. Characteristics:	
Subsurface flow: Unknown . Explain findings: . Dye (or other) test performed: .	
changes in the character of soil character of soil shelving t vegetation matted down, bent, or absent s leaf litter disturbed or washed away s sediment deposition n	he presence of litter and debris destruction of terrestrial vegetation he presence of wrack line sediment sorting scour nultiple observed or predicted flow events abrupt change in plant community
 ☐ oil or scum line along shore objects ☐ su ☐ fine shell or debris deposits (foreshore) ☐ ph 	ral extent of CWA jurisdiction (check all that apply): High Water Mark indicated by: rvey to available datum; sysical markings; getation lines/changes in vegetation types.

(iii) Chemical Characteristics:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. ⁷Ibid.

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.). Explain: The following is a general characterization of pollutants that affect water quality in the subject creeks rather than site specific. Site specific data on water quality was not collected due to extremely dry conditions for the rain year which has resulted in dry streambeds or streamflow dominated by urban runoff.

Identify specific pollutants, if known: In the subject creeks, runoff contributes herbicides/pesticides, petroleum products, sediment from agricultural operations, and trash.

(iv) Biological Characteristics. Channel supports (check all that apply):

- Riparian corridor. Characteristics (type, average width): 20 feet approx. on either side of the subject creeks.
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:

Creek, Romero Creek) support rainbow trout, and most also support common native amphibian species (tree frog, Pacific chorus frog).

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

- (a) General Wetland Characteristics:
 - Properties:
 - Wetland size:0.04 acres

Wetland type. Explain: See data sheet for soil test pit number and characterization.

Wetland quality. Explain: See data sheet for soil test pit number and characterization.

Project wetlands cross or serve as state boundaries. Explain:

(b) <u>General Flow Relationship with Non-TNW</u>: Flow is: **Intermittent flow**. Explain:

Surface flow is: Discrete and confined

Characteristics:

Subsurface flow: **Unknown**. Explain findings: Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- Directly abutting
- Not directly abutting
 - Discrete wetland hydrologic connection. Explain:
 - Ecological connection. Explain:
 - Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **1** (or less) river miles from TNW. Project waters are **1** (or less) aerial (straight) miles from TNW. Flow is from: Wetland to navigable waters. Estimate approximate location of wetland as within the **2-year or less** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: The Franklin Creek Watershed in which AC2 is located and the Toro Creek watershed in which AC16 is located consist of undeveloped forest service land (upper watershed, steep slopes), low density development, agricultural development (orchards) and higher density development including US 101 (lower watershed).

Identify specific pollutants, if known: Runoff in the Franklin Creek and Toro Creek watersheds contribute

herbicides/pesticides, petroleum products, manure from horse properties, sediment from agricultural operations, and trash.

(iii) Biological Characteristics. Wetland supports (check all that apply):

Riparian buffer. Characteristics (type, average width):

Vegetation type/percent cover. Explain: Riparian vegetation immediately upstream of the AC16 wetland provides greater than 50 percent cover (shade) and includes a mosaic of arroyo willow, western sycamore and coast live oak. The watershed upstream of the AC2 wetland is developed and biological characteristics are substantially degraded.

- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:

Other environmentally-sensitive species. Explain findings:

Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: 2

Approximately (0.04) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Summarize overall biological, chemical and physical functions being performed: The AC2 wetland is located north of US 101 and performs few functions for the aquatic ecosystem. The primary function of the AC2 wetland is as a filter for storm runoff from adjacent roads and developed areas. The AC16 wetland is located in the bottom of Toro Creek and performs functions similar to those found in Toro Creek. The wetland supports wetland vegetation, likely supports amphibians (when wet), and may reduce the velocity of streamflow during high flow events.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:..
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- **3.** Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

- TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: acres.
- 2. RPWs that flow directly or indirectly into TNWs.
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:

- Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Waters in the study area are considered RPWs and flow seasonally (typically three months each year) following rainfall events which occur between October and April of most years in this part of southern California. The wetland AC2 received seasonal urban runoff from roads and adjacent developed areas. The wetland (AC16) is located within Toro Creek mainstem, is in-line with the flow so it is inundated seasonally.
 - Provide estimates for jurisdictional waters in the review area (check all that apply):
 - Tributary waters: linear feet width (ft).
 - \boxtimes Other non-wetland waters: 0.52 acres.
 - Identify type(s) of waters: **RPW**.

Non-RPWs⁸ that flow directly or indirectly into TNWs. 3.

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet
 - Other non-wetland waters:

acres. Identify type(s) of waters:

Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. 4.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

width (ft).

Ketlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: All waters and adjacent wetlands in the study area are considered RPWs and flow seasonally (typically three months each year) following rainfall events which occur between October and April of most years in this part of southern California. Wetland AC2 receives surface runoff from roads and developed areas and flows directly into OW17 which drains to Franklin Creek and then to the Carpinteria Salt Marsh (nearest TNW). Wetland (AC16) directly abuts Toro Creek (and is in-line with the stream flow) and thus has a direct hydrological surface connection to Toro Creek which flows directly to the Pacific Ocean (nearest TNW).

Provide acreage estimates for jurisdictional wetlands in the review area: 0.04 acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

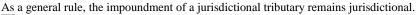
Provide acreage estimates for jurisdictional wetlands in the review area: acres.

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. 6.

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

Impoundments of jurisdictional waters.⁹ 7.



- Demonstrate that impoundment was created from "waters of the U.S.," or
 - Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 - Demonstrate that water is isolated with a nexus to commerce (see E below).

⁸See Footnote # 3.

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

E.	 ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰ which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	 Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	 NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: . Other: (explain, if not covered above): .
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	 Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: . Wetlands: acres.
<u>SE(</u>	CTION IV: DATA SOURCES.
А.	 SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: Carpinteria and Santa Barbara. USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name:

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos*.

	State/Local wetland inventory map(s):
	FEMA/FIRM maps:
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
	Photographs: Aerial (Name & Date):
	or 🗌 Other (Name & Date):October 9, 2008.
	Previous determination(s). File no. and date of response letter:
	Applicable/supporting case law:
	Applicable/supporting scientific literature:
\boxtimes	Other information (please specify): Jurisdictional Delineation Report (prepared by SWCA, May 2010).

B. ADDITIONAL COMMENTS TO SUPPORT JD: All waters and adjacent wetlands in the study area are natural streams that have been modified by development yet continue to support native vegetation and wildlife species in the vicinity of the review area. All creeks and some roadside drainages near the Carpinteria Salt Marsh are considered RPWs and flow seasonally (typically three months each year) following rainfall events which occur between October and April of most years in this part of southern California.