Jurisdictional Delineation

US 101 Express Lanes Project

State of California
Department of Transportation
District 4

Santa Clara County, CA
Project No. 0412000459/EA 2G7100
US 101 PM 16.00–52.55
SR 85 PM 23.0–24.1

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Summary

This jurisdictional delineation report presents the results of a survey for wetlands and other waters of the United States performed within the biological study area (BSA) for the United States Highway 101 (US 101) Express Lanes Project in Santa Clara County, California. URS biologists formally delineated potential wetlands and other waters of the United States using the routine, on-site methodology described in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) and guidance from the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008).

Within the 1,816-acre BSA, 4.27 acres of potential jurisdictional waters of the United States were identified. Of the total acreage of potential waters of the United States identified in the BSA, 3.24 acres are potential other waters of the United States and 1.03 acres are potential jurisdictional wetlands. An additional 0.09 acre of potential non-jurisdictional (isolated) wetlands was also delineated. The results of this jurisdictional delineation are presented in order to request an approved jurisdictional determination from the U.S. Army Corps of Engineers (USACE) for all waters of the United States found within the BSA of the US 101 Express Lanes Project.
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## Abbreviated Terms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSA</td>
<td>Biological study area</td>
</tr>
<tr>
<td>Caltrans</td>
<td>California Department of Transportation</td>
</tr>
<tr>
<td>C.F.R</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CWA</td>
<td>(Federal) Clean Water Act of 1977</td>
</tr>
<tr>
<td>CWUS</td>
<td>Culverted Waters of the United States</td>
</tr>
<tr>
<td>EPA</td>
<td>U.S. Environmental Protection Agency</td>
</tr>
<tr>
<td>FAC</td>
<td>facultative</td>
</tr>
<tr>
<td>FACW</td>
<td>facultative wetland</td>
</tr>
<tr>
<td>HOT</td>
<td>high occupancy toll</td>
</tr>
<tr>
<td>HOV</td>
<td>high occupancy vehicle</td>
</tr>
<tr>
<td>HWUS</td>
<td>Historic Waters of the United States</td>
</tr>
<tr>
<td>NHD</td>
<td>National Hydrography Dataset</td>
</tr>
<tr>
<td>NJ-WL</td>
<td>Non-jurisdictional water of the U.S.</td>
</tr>
<tr>
<td>NRCS</td>
<td>Natural Resources Conservation Service</td>
</tr>
<tr>
<td>OBL</td>
<td>obligate wetland</td>
</tr>
<tr>
<td>OHWM</td>
<td>ordinary high water mark</td>
</tr>
<tr>
<td>PM</td>
<td>post mile</td>
</tr>
<tr>
<td>project</td>
<td>US 101 Express Lanes Project</td>
</tr>
<tr>
<td>RPW</td>
<td>relatively permanent water</td>
</tr>
<tr>
<td>RWQCB</td>
<td>Regional Water Quality Control Board</td>
</tr>
<tr>
<td>SR</td>
<td>State Route</td>
</tr>
<tr>
<td>TNW</td>
<td>traditional navigable water</td>
</tr>
<tr>
<td>UPL</td>
<td>obligate upland plants</td>
</tr>
<tr>
<td>US 101</td>
<td>United States Highway 101</td>
</tr>
<tr>
<td>USACE</td>
<td>U.S. Army Corps of Engineers</td>
</tr>
<tr>
<td>USGS</td>
<td>U.S. Geological Survey</td>
</tr>
<tr>
<td>VTA</td>
<td>Santa Clara Valley Transportation Authority</td>
</tr>
<tr>
<td>WUS</td>
<td>other waters of the United States</td>
</tr>
<tr>
<td>WWUS</td>
<td>Wetlands</td>
</tr>
</tbody>
</table>
1 Introduction

This report describes the methods and results of a jurisdictional delineation of waters of the United States (waters of the U.S.), including wetlands and other waters of the U.S., for the United States Highway 101 (US 101) Express Lanes Project (project) in Santa Clara County, California (Figure 1). URS conducted the jurisdictional delineation on behalf of the California Department of Transportation (Caltrans), in cooperation with the Santa Clara Valley Transportation Authority (VTA). The project limits along US 101 extend from post mile (PM) 16.00 to PM 52.55, just north of the Oregon Expressway/Embarcadero Road interchange in Palo to the East Dunne Avenue interchange in Morgan Hill. The project corridor includes a portion of State Route (SR) 85 in Mountain View from PM 23.0 at the US 101/SR 85 interchange to PM 24.1 just north of West Dana Street. Auxiliary lanes are proposed on US 101 in both directions between Great America Parkway and Lawrence Expressway. A larger biological study area (BSA) surrounds the project limits on US 101 and SR 85 and was evaluated for this jurisdictional delineation.

The objective of the delineation was to define, record, and map the portions of the project BSA that qualify as potential waters of the U.S. in order to request an approved jurisdictional determination from the U.S. Army Corps of Engineers (USACE).

1.1 Project Description

The US 101 Express Lanes Project proposes to convert the existing High Occupancy Vehicle (HOV) lanes along US 101 to High Occupancy Toll (HOT) lanes (hereafter known as express lanes). A second express lane would be added in each direction on US 101 within the overall project limits from the East Dunne Avenue interchange in Morgan Hill to the Santa Clara/San Mateo County line just north of the Oregon Expressway/Embarcadero Road interchange in Palo Alto. The project would also convert the US 101/SR 85 HOV direct connectors in Mountain View to express lane connectors, restripe the northern 1.1 miles of SR 85 to introduce a buffer separating the mixed flow lanes from the express lanes, and connect the SR 85 express lanes to the US 101 express lanes. The project length is 36.55 miles on US 101 and 1.1 miles on SR 85, for a total of 37.65 miles (Figure 1). Project construction is scheduled to begin in 2015 and be completed by 2018.
1.2 Biological Study Area
The BSA includes 1,816 acres and extends beyond the physical limits of proposed project construction. The jurisdictional delineation covered the entire BSA in order to address potentially jurisdictional features within and adjacent to project construction areas (Appendix A, Sheets 1-40 and Detail Sheets 41-69).

The BSA includes the entire length of US 101 between the East Dunne Avenue interchange in Morgan Hill and just north of the Oregon Expressway/Embarcadero Road interchange in Palo Alto. In most areas along the US 101 corridor, the BSA boundary aligns with the right-of-way boundary, which is usually defined by a fence or by soundwalls that separate the freeway from nearby commercial and residential development. In addition, at the major freeway interchanges, the BSA widens to cover the median areas between roadways and freeway ramps.

1.3 Definitions
This section describes the legal definition of wetlands and other waters of the U.S.; modifications to the definition of waters of the U.S., wetlands and other waters potentially exempt from USACE jurisdiction; and waters of the state under the regulatory discretion of the Regional Water Quality Control Board (RWQCB).

1.3.1 Wetlands and Other Waters of the United States
Wetlands and other waters (e.g., rivers, streams) are subsets of “waters of the United States” and receive protection under Section 404 of the Clean Water Act (CWA). The USACE has primary federal responsibility under the CWA for administering regulations that concern waters and wetlands. In this regard, the USACE acts under two statutory authorities, the Rivers and Harbors Act (Sections 9 and 10), which governs specified activities in “navigable waters,” and the CWA (Section 404), which governs specified activities in “waters of the United States,” including wetlands.

As defined in the Code of Federal Regulations (33 C.F.R. 328.3[a]; 40 C.F.R. 230.3[s]), waters of the United States refers to:

“(1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) All interstate waters including interstate wetlands; (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural basins, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters which are or could
be used by interstate or foreign travelers for recreational or other purposes; or from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or which are used or could be used for industrial purposes by industries in interstate commerce; (4) All impoundments of waters otherwise defined as waters of the United States under the definition; (5) Tributaries of waters identified in paragraphs (1) through (4); (6) Territorial seas; and (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6).”

The USACE and the U.S. Environmental Protection Agency (EPA) define wetlands as, “Those areas that are saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support a prevalence of vegetation typically adapted for the life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

The term other waters of the United States is used to characterize water bodies (e.g., streams, rivers, creeks and channels) that exhibit an ordinary high water mark and evidence of hydrology, but are not wetlands.

1.3.2 Rapanos v. United States and Carabell v. Army Corps of Engineers

Two cases brought before the U.S. Supreme Court, Rapanos v. United States (No. 04-1034) and Carabell v. Army Corps of Engineers (No. 04-1384) (hereafter referred to together as Rapanos), challenged the USACE’s interpretation of waters of the United States (USACE 2007). USACE had interpreted 33 U.S.C. 1362(7) of the CWA to regulate wetland areas that are separated from a tributary of a navigable water by a narrow, constructed berm, where evidence of an occasional hydrologic connection existed between the wetland and the tributary.

On June 19, 2006, the court ruling in Rapanos tightened the definition of waters of the United States. The decision stated that a water or wetland constitutes “navigable waters” under the CWA if it possesses a “significant nexus” to waters that are currently navigable or could feasibly be made navigable. On June 5, 2007, USACE and the EPA, in response to the ruling, issued a joint memorandum that put forth new guidelines for establishing whether wetlands or other waters of the United States fall within USACE jurisdiction (USACE 2007). In the guidelines, the agencies assert jurisdiction over traditional navigable waters (TNWs), wetlands adjacent to TNWs, non-navigable tributaries to TNWs that are relatively permanent waters (RPWs), and wetlands that abut RPWs.
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Project Location and Regional Setting

Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps
The agencies may take jurisdiction over non-navigable tributaries that are not RPWs, wetlands that are adjacent to non-RPWs, and wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary. The agencies will generally not assert jurisdiction over swales, erosional features, or ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

1.3.3 Wetlands and Other Waters Potentially Exempt from USACE Jurisdiction

A number of exemptions from CWA regulations exist for areas that would otherwise qualify as waters of the United States. These exemptions are classified as either discretionary or non-discretionary exemptions. The ruling in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers* created another type of exemption (described below).

1.3.3.1 Discretionary Exemptions

**Exemption Criteria.** As described in the discussion of USACE regulations in the November 13, 1986, *Federal Register*, certain areas that meet the technical definition of wetlands generally are not considered waters of the United States (33 C.F.R. 328.3[a]). However, USACE and EPA reserve the right to determine that a particular water body within the categories listed below is a water of the United States on a case-by-case basis. These categories are:

- Non-tidal drainage and irrigation ditches excavated on dry land
- Artificially irrigated areas that would revert to upland, if the irrigation ceased
- Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and that are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing
- Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons
- Water filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States

**Determination of Exemption.** The technical definition of a wetland or non-wetland water of the United States that does not meet the USACE criteria for jurisdiction on the basis of *Rapanos* is briefly summarized below.
Features such as roadside ditches, drainage ditches, or irrigation canals that appear to have been excavated in uplands and do not convey or connect to other waters of the United States are considered non-jurisdictional waters under the USACE methodology. Many of these features are in areas with little or no topography indicative of a flow path to a seasonal stream (a stream that flows approximately 3 months a year) that eventually discharges to a TNW. Canals and ditches that do not maintain a flow connection with a TNW are considered isolated. Canals that transport water from a RPW that do not reconnect or recirculate water back to a RPW draining to a TNW are not considered jurisdictional. Likewise, any man-made drainage ditch that drains uplands to a RPW is not jurisdictional. An exception to this exemption may be a flood-irrigated field that is watered by a jurisdictional canal that is found to drain to a ditch leading to a RPW connected to a TNW. Several features meeting criteria for an exemption were identified in the BSA along the US 101 right-of-way.

1.3.3.2 Non-Discretionary Exemptions

Exemption Criteria. In addition to the discretionary exemptions described above, USACE regulations contain a non-discretionary exemption for waste treatment systems designed to meet the requirements of the CWA (33 C.F.R. 328.3[a][7]). Such areas, which include treatment ponds and lagoons, are not considered waters of the United States.

Determination of Exemption. No areas were found in the BSA that met the criteria for a non-discretionary exemption.

1.3.3.3 Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers

Exemption Criteria. On January 9, 2001, the U.S. Supreme Court issued a decision in Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers. The case involved the filling of hydrologically isolated waters that had formed from remnant excavation ditches on a 533-acre parcel. In the decision, the court denied USACE jurisdiction over isolated water bodies, which USACE had previously regulated using the “Migratory Bird Rule,” which was established in 1986. The court defined isolated waters as any body of water that is non-navigable, intrastate, and lacking any significant nexus to navigable bodies of water.

Determination of Exemption. No wetlands or non-wetland waters of the United States are present in the project area that were designated as jurisdictional solely on the basis of the Migratory Bird Rule. Therefore, this ruling does not apply to the BSA.
1.3.4 **Waters of the State and the Regional Water Quality Control Boards**

Acting under the leadership of the State Water Resources Control Board and under the statutory authority of Section 401 of the CWA and the Porter-Cologne Water Quality Act, the Regional Water Quality Control Boards (RWQCBs) protect the beneficial uses of surface water and groundwater in California. The RWQCBs regulate all pollutant or nuisance discharges that may affect either surface waters or groundwaters of the state. In cases where the waters are excluded from regulation under the federal CWA, the RWQCBs may exercise jurisdiction over discharges into waters of the state, pursuant to the Porter-Cologne Act. In the absence of a legally approved formal protocol for delineating waters of the state, all potential waters of the U.S., as well as all isolated waters, are considered potential waters of the state.
2 Methods

This section describes the methods used to delineate potential jurisdictional wetlands and other waters of the U.S. in the BSA.

URS biologists formally delineated the potential wetlands and other waters of the U.S. in the BSA in March 2012 (Table 1). Wetlands were delineated in accordance with the routine on-site methodology described in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and using guidance from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual (Version 2.0): Arid West Region* (USACE 2008).

**Table 1: Survey Dates and Personnel**

<table>
<thead>
<tr>
<th>Survey Type and Date</th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdictional Delineation</td>
<td></td>
</tr>
<tr>
<td>March 7, 2012</td>
<td>Casey Stewman, Joe Bandel</td>
</tr>
<tr>
<td>March 8, 2012</td>
<td>Casey Stewman, Joe Bandel</td>
</tr>
<tr>
<td>March 9, 2012</td>
<td>Casey Stewman, Joe Bandel</td>
</tr>
<tr>
<td>March 15, 2012</td>
<td>Casey Stewman, Joe Bandel</td>
</tr>
<tr>
<td>March 16, 2012</td>
<td>Casey Stewman, Joe Bandel</td>
</tr>
</tbody>
</table>

2.1 Three-Parameter Approach to Wetlands

The USACE methodology for delineating wetlands relies on a three-parameter approach to determine if an area is a potential jurisdictional wetland. The three parameters are hydric soil, wetland hydrology, and hydrophytic vegetation. Under normal circumstances (undisturbed conditions), a potential jurisdictional wetland must have positive wetland indicators of hydric soils, wetland hydrology, and a dominance of hydrophytic vegetation. Positive wetland indicators for these parameters include field indicators and published data (e.g., U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) lists of hydric soils). The following sections describe the general diagnostic characteristics and some of the typical positive wetland indicators for each parameter.

2.1.1 Hydric Soils

Soils are considered hydric if the soil is classified as hydric by the NRCS or if field indicators associated with reducing soil conditions are present. The NRCS defines a hydric soil as a soil that formed where conditions of saturation, flooding, or ponding occurred long enough during the growing season to develop anaerobic conditions in the upper portion of the soil profile. Local and national soil surveys published by the
NRCS are used to determine the types of soil present in an area. National and local hydric soil lists provide a checklist of soil types that are classified as hydric. Field indicators of hydric soils are identified in the *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils* (USDA-NRCS 2010). Field indicators may also include organic hydric soils (or histisols); histic epipedons; sulfidic material; aquic or peraquic moisture regimes; reduced soil conditions, as indicated by oxidized rhizospheres; soil color, including gleyed soils, soils with mottles, and/or low-matrix chroma; and iron and manganese concretions.

### 2.1.2 Wetland Hydrology

Wetland hydrology is defined as inundation or saturation in the upper 12 inches of the soil for at least 5 percent of the growing season in most years (Environmental Laboratory 1987). The growing season in the project area is approximately 254 days based on “frost-free days” (NRCS 1995a); 5 percent of the growing season is therefore approximately 13 days. Factors that influence hydrology include precipitation, topography, soil permeability, and plant cover. Primary indicators of wetland hydrology include inundation or saturation in the upper 12 inches, drift lines, sediment deposits, and drainage patterns. Secondary indicators include oxidized rhizospheres, water-stained leaves, local soil survey data, and the facultative (FAC)-neutral test of vegetation.

### 2.1.3 Hydrophytic Vegetation

Jurisdictional wetlands are typically dominated by hydrophytic plant species, specifically that more than 50 percent of the dominant plant species have an indicator status of FAC, facultative wetland (FACW), or obligate (OBL) (Reed 1988). As defined by the USACE (Environmental Laboratory 1987), hydrophytic vegetation is “the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present.” Definitions for each of the plant indicator statuses are included in Table 2.
### Table 2: Plant Indicator Status Categories

<table>
<thead>
<tr>
<th>Indicator Category</th>
<th>Indicator Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obligate Wetland Plants</td>
<td>OBL</td>
<td>Plants that occur almost always (&gt;99%) in wetlands under natural conditions, but which may also occur rarely (&lt;1%) in non-wetlands.</td>
</tr>
<tr>
<td>Facultative Wetland Plants</td>
<td>FACW</td>
<td>Plants that occur usually (67%–99%) in wetlands but also occur (1–33%) in non-wetlands.</td>
</tr>
<tr>
<td>Facultative Plants</td>
<td>FAC</td>
<td>Plants with a similar likelihood (34%–66%) of occurring both in wetlands and non-wetlands.</td>
</tr>
<tr>
<td>Facultative Upland Plants</td>
<td>FACU</td>
<td>Plants that occur sometimes (1%–33%) in wetlands, but occur more often (67%–99%) in non-wetlands.</td>
</tr>
<tr>
<td>Obligate Upland Plants</td>
<td>UPL</td>
<td>Plants that occur rarely (&lt;1%) in wetlands, but occur almost always (&gt;99%) in non-wetlands under natural conditions.</td>
</tr>
</tbody>
</table>

Source: Reed 1988.

### 2.2 Delineating Other Waters of the U.S.

The locations and positions of potential other waters of the U.S. were determined based upon a field verification of features shown within the BSA in the National Hydrography Dataset (NHD) (USGS 2008) and on the U.S. Geological Survey (USGS) topographic quadrangle maps of the BSA. Potential other waters of the U.S. were delineated based upon the visible presence of an ordinary high water mark (OHWM), indicated by signs such as wrack lines, scour, debris build-up, and changes in the plant community.

Waters that were contained within underground culverts were not surveyed or delineated in the BSA. These underground culverts were either fully culverted within the BSA or the length of the culvert was inaccessible. The linear extent of each feature was estimated using the approximate position of the blue-line features depicted in the NHD. Due to missing blue-lines or incorrectly geo-referenced blue-lines in the NHD, the linear extent of the culverted waters of the U.S. (CWUS-7 to CWUS-17) were estimated based on the location of the upstream and downstream culvert openings as observed in the field or on aerial mapping. The USGS’s National Map Viewer (USGS 2013) was used to determine if the culverts depicted in the NHD have connectivity to any TNWs.

### 2.3 Field Data Collection

The boundaries of all waters, including wetlands and other waters of the U.S., were mapped in the field using a sub-meter accuracy Trimble© backpack Global Positioning System unit. Where feasible, data points were recorded at the location where wetland and upland datasheets were completed in each of the wetlands in the
BSA. Wetland boundaries were extrapolated based on similar variations in vegetation, hydrology, and topography. Maps depicting the waters of the U.S. within the BSA and wetland sample points are included in Appendix A. Copies of the delineation data forms and wetland determination forms are provided in Appendix B. Photographs of jurisdictional features are provided in Appendix C. A list of the vascular plants identified in the BSA is provided in Appendix D.

2.4 Climate
The jurisdictional delineation was conducted in the spring of 2012, near the end of the rainy season for the area. Precipitation during the 2011/2012 winter was considered normal with approximately 8.9 inches of rainfall (Western Regional Climate Center 2012). Therefore, it was assumed that at the time of the delineation, conditions were normal in the BSA. Graph 1 shows the precipitation in the San Jose area for 2012.

Graph 1. Total Monthly Precipitation for the San Jose Airport Weather Station

2.5 Soils in the Biological Study Area
The online soil survey for Santa Clara County (NRCS 2012) was used to identify soil series within the BSA. Forty-five soil series and/or complexes occur along the project corridor. Seventeen of these soil units are composed of urban land complexes. Ten of these soils are listed as hydric soils in California (NRCS 1995b). The soils are from alluvium derived from metamorphic and sedimentary or metavolcanic rock. Table 3 lists the soil series and selected characteristics in the BSA. The soil series within the BSA are shown on Figure 2.
Table 3: Soil Series and Selected Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Soil Type</th>
<th>Drainage</th>
<th>Permeability</th>
<th>Landscape Position</th>
<th>Principal Soil Textures</th>
<th>Hydric Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Urban land, 0 to 2 percent slopes, alluvial fan</td>
<td>NA</td>
<td>NA</td>
<td>Basin floors</td>
<td>Disturbed and human transported material</td>
<td>No</td>
</tr>
<tr>
<td>102</td>
<td>Urban land, 0 to 2 percent slopes, alluvial fan</td>
<td>NA</td>
<td>NA</td>
<td>Alluvial fan, basin floors</td>
<td>Disturbed and human transported material</td>
<td>No</td>
</tr>
<tr>
<td>120</td>
<td>Aquic Xerothents, bay mud stratum, 0 to 2 percent slopes</td>
<td>Poorly drained</td>
<td>Moderately low to Moderately High</td>
<td>Basins, estuaries</td>
<td>Gravelly sandy loam, silty clay</td>
<td>No</td>
</tr>
<tr>
<td>130</td>
<td>Urban land-Still complex, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately high to high</td>
<td>Alluvial fans, flood plains</td>
<td>Sandy loam, very find sandy loam, silt loam, loam</td>
<td>No</td>
</tr>
<tr>
<td>131</td>
<td>Urban land-Elpaloalto complex, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately high</td>
<td>Alluvial fans</td>
<td>Clay loam, silty clay loam</td>
<td>Yes</td>
</tr>
<tr>
<td>135</td>
<td>Urban land-Stevens Creek complex, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately high</td>
<td>Alluvial fans</td>
<td>Sandy loam, silt loam, silty clay loam, clay loam</td>
<td>No</td>
</tr>
<tr>
<td>145</td>
<td>Urban land-Hangerone complex, 0 to 2 percent slopes, drained</td>
<td>Poorly drained</td>
<td>Moderately low to moderately high</td>
<td>Basin floors</td>
<td>Clay, clay loam, gravelly loam</td>
<td>Yes</td>
</tr>
<tr>
<td>146</td>
<td>Hangerone clay loam, drained, 0 to 2 percent slopes</td>
<td>Poorly drained</td>
<td>Moderately low to moderately high</td>
<td>Basin floors</td>
<td>Clay, clay loam, gravelly loam</td>
<td>Yes</td>
</tr>
<tr>
<td>150</td>
<td>Urban land-Embarcadero complex, 0 to 2 percent slopes, drained</td>
<td>Very poorly drained</td>
<td>Moderately low to moderately high</td>
<td>Basin floors</td>
<td>Clay loam, clay, silty clay</td>
<td>Yes</td>
</tr>
<tr>
<td>157</td>
<td>Novato clay, 0 to 1 percent slopes, protected</td>
<td>Very poorly drained</td>
<td>Very low to moderately high</td>
<td>Marshes</td>
<td>Clay</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 3: Soil Series and Selected Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Soil Type</th>
<th>Drainage</th>
<th>Permeability</th>
<th>Landscape Position</th>
<th>Principal Soil Textures</th>
<th>Hydric Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>160</td>
<td>Urban land-Clear Lake complex, 0 to 2 percent slopes</td>
<td>Moderately well drained</td>
<td>Moderately low to moderately high</td>
<td>Basin floors</td>
<td>Silty clay</td>
<td>Yes</td>
</tr>
<tr>
<td>165</td>
<td>Urban land-Campbell complex, 0 to 2 percent slopes, protected</td>
<td>Moderately well drained</td>
<td>Moderately low to moderately high</td>
<td>Alluvial fans</td>
<td>Silt loam, silty clay loam</td>
<td>No</td>
</tr>
<tr>
<td>166</td>
<td>Campbell silt loam, 0 to 2 percent slopes, protected</td>
<td>Moderately well drained</td>
<td>Moderately low to moderately high</td>
<td>Alluvial fans</td>
<td>Silt loam, silty clay loam</td>
<td>No</td>
</tr>
<tr>
<td>169</td>
<td>Urban land-Elder complex, 0 to 2 percent slopes, protected</td>
<td>Somewhat excessively drained</td>
<td>High</td>
<td>Alluvial fans, streams</td>
<td>Slightly decomposed plant material, fine sandy loam</td>
<td>Yes</td>
</tr>
<tr>
<td>170</td>
<td>Urban land-Landelspark complex, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately High</td>
<td>Alluvial fans</td>
<td>Slightly decomposed plant material, sandy loam, sandy clay loam, very gravelly sand, silty clay loam, clay loam, sandy clay loam</td>
<td>No</td>
</tr>
<tr>
<td>171</td>
<td>Elder fine sandy loam, 0 to 2 percent slopes, rarely flooded</td>
<td>Somewhat excessively drained</td>
<td>High</td>
<td>Alluvial plains</td>
<td>Slightly decomposed plant material, fine sandy loam, sandy loam</td>
<td>Yes</td>
</tr>
<tr>
<td>173</td>
<td>Canine Creek-Elder complex, 0 to 2 percent slopes, rarely flooded</td>
<td>Well drained</td>
<td>High</td>
<td>Streams</td>
<td>Fine sandy loam, extremely gravelly sandy loam</td>
<td>Yes</td>
</tr>
<tr>
<td>174</td>
<td>Urban land-Canine Creek-Elder complex, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>High</td>
<td>Alluvial fans</td>
<td>Fine sandy loam, extremely gravelly sandy loam</td>
<td>No</td>
</tr>
</tbody>
</table>
Table 3: Soil Series and Selected Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Soil Type</th>
<th>Drainage</th>
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<th>Landscape Position</th>
<th>Principal Soil Textures</th>
<th>Hydric Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>180</td>
<td>Urban land-Newpark complex, 0 to 2 percent slopes</td>
<td>Moderately well drained</td>
<td>Moderately high</td>
<td>Alluvial fans</td>
<td>Silty clay loam, fine sandy loam</td>
<td>No</td>
</tr>
<tr>
<td>185</td>
<td>Urban land-Bayshore complex, 0 to 2 percent slopes, drained</td>
<td>Poorly drained</td>
<td>Moderately high</td>
<td>Alluvial fans, basin floors</td>
<td>Loam, sandy clay loam, gravelly sandy loam</td>
<td>Yes</td>
</tr>
<tr>
<td>300</td>
<td>Urban land-Montara complex, 15 to 30 percent slopes</td>
<td>Somewhat excessively drained</td>
<td>Very low to moderately low</td>
<td>Hills</td>
<td>Sandy loam, gravelly sandy loam, cobbly sandy loam, bedrock</td>
<td>No</td>
</tr>
<tr>
<td>302</td>
<td>Montara-Rock outcrop complex, 30 to 50 percent slopes</td>
<td>Somewhat excessively drained</td>
<td>Very low to moderately low</td>
<td>Hills</td>
<td>Sandy loam, gravelly sandy loam, cobbly sandy loam, bedrock</td>
<td>No</td>
</tr>
<tr>
<td>303</td>
<td>Montara-Santerhill complex, 15 to 30 percent slopes</td>
<td>Somewhat excessively drained</td>
<td>Very low to moderately low</td>
<td>Hills</td>
<td>Sandy loam, gravelly sandy loam, cobbly sandy loam, bedrock</td>
<td>No</td>
</tr>
<tr>
<td>305</td>
<td>Alo-Altamont complex, 15 to 30 percent slopes</td>
<td>Well drained</td>
<td>Very low to moderately low</td>
<td>Hills</td>
<td>Clay, silty clay, bedrock</td>
<td>No</td>
</tr>
<tr>
<td>309</td>
<td>Urban land-Altamont-Alo complex, 9 to 15 percent slopes</td>
<td>Well drained</td>
<td>Very low to moderately low</td>
<td>Hills</td>
<td>Clay loam, clay, bedrock</td>
<td>No</td>
</tr>
<tr>
<td>317</td>
<td>Urban land-Cropley complex, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately low to moderately high</td>
<td>Alluvial fans</td>
<td>Clay, sandy clay loam</td>
<td>No</td>
</tr>
<tr>
<td>315</td>
<td>Cropley clay, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately low to moderately high</td>
<td>Alluvial fans</td>
<td>Clay, sandy clay loam</td>
<td>No</td>
</tr>
<tr>
<td>AcE</td>
<td>Altamont clay, 15 to 30 percent slopes</td>
<td>Well drained</td>
<td>Very low to moderately low</td>
<td>Mountain slopes</td>
<td>Clay; weathered bedrock</td>
<td>No</td>
</tr>
</tbody>
</table>
Table 3: Soil Series and Selected Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Soil Type</th>
<th>Drainage</th>
<th>Permeability</th>
<th>Landscape Position</th>
<th>Principal Soil Textures</th>
<th>Hydric Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArA</td>
<td>Arbuckle gravelly loam, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately high to high</td>
<td>Terraces</td>
<td>Gravelly loam, very gravelly sandy loam</td>
<td>No</td>
</tr>
<tr>
<td>CID</td>
<td>Climara clay, 9 to 30 percent slopes</td>
<td>Well drained</td>
<td>Very low</td>
<td>Mountain slopes</td>
<td>Clay; unweathered bedrock</td>
<td>No</td>
</tr>
<tr>
<td>CoB</td>
<td>Cortina very gravelly loam, 0 to 5 percent slopes</td>
<td>Somewhat excessively drained</td>
<td>Moderately high to high</td>
<td>Floodplains</td>
<td>Very gravelly loam, very gravelly sandy loam</td>
<td>No</td>
</tr>
<tr>
<td>CrA</td>
<td>Cropley clay, 0 to 2 percent slopes</td>
<td>Well Drained</td>
<td>Moderately low to moderately high</td>
<td>Alluvial fans, terraces</td>
<td>Clay</td>
<td>No</td>
</tr>
<tr>
<td>DaD</td>
<td>Diablo clay, 9 to 15 percent slopes</td>
<td>Well drained</td>
<td>Moderately low</td>
<td>Mountain slopes</td>
<td>Clay, bedrock</td>
<td>No</td>
</tr>
<tr>
<td>GaA</td>
<td>Garretson loam, gravel substratum, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately high to high</td>
<td>Alluvial fans, stream terraces</td>
<td>Loam, very fine sandy loam, stratified sand</td>
<td>No</td>
</tr>
<tr>
<td>InG2</td>
<td>Inks rocky clay loam, 50 to 75 percent slopes, eroded</td>
<td>Somewhat excessively drained</td>
<td>Very low</td>
<td>Mountain slopes</td>
<td>Gravelly clay loam, unweathered bedrock</td>
<td>No</td>
</tr>
<tr>
<td>LrC</td>
<td>Los Robles clay loam, 2 to 9 percent slopes</td>
<td>Well drained</td>
<td>Moderately high</td>
<td>Alluvial fans</td>
<td>Clay loam, gravelly clay loam</td>
<td>No</td>
</tr>
<tr>
<td>McB</td>
<td>Maxwell clay, 0 to 5 percent slopes</td>
<td>Moderately well drained</td>
<td>Moderately low to moderately high</td>
<td>Alluvial fans</td>
<td>Clay, gravelly clay loam</td>
<td>No</td>
</tr>
<tr>
<td>MwF2</td>
<td>Montara rocky clay loam, 15 to 50 percent slopes, eroded</td>
<td>Somewhat excessively drained</td>
<td>Very low</td>
<td>Mountain slopes</td>
<td>Clay loam, unweathered bedrock</td>
<td>No</td>
</tr>
<tr>
<td>PoA</td>
<td>Pleasanton loam, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately high</td>
<td>Terraces, alluvial fans</td>
<td>Loam, clay loam, gravelly clay loam, gravelly sandy clay loam</td>
<td>No</td>
</tr>
</tbody>
</table>
Methods

Table 3: Soil Series and Selected Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Soil Type</th>
<th>Drainage</th>
<th>Permeability</th>
<th>Landscape Position</th>
<th>Principal Soil Textures</th>
<th>Hydric Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rg</td>
<td>Riverwash</td>
<td>NA</td>
<td>High</td>
<td>Drainageways</td>
<td>Sand, stratified coarse sand, sandy loam</td>
<td>No</td>
</tr>
<tr>
<td>SbE2</td>
<td>San Benito clay loam, 15 to 30 percent slopes, eroded</td>
<td>Well drained</td>
<td>Very low</td>
<td>Mountain slopes</td>
<td>Clay loam, silty clay loam, weathered bedrock</td>
<td>No</td>
</tr>
<tr>
<td>SbF3</td>
<td>San Benito clay loam, 30 to 50 percent slopes, severely eroded</td>
<td>Well drained</td>
<td>Very low</td>
<td>Mountain slopes</td>
<td>Clay loam, silty clay loam, weathered bedrock</td>
<td>No</td>
</tr>
<tr>
<td>SdA</td>
<td>San Ysidro loam, 0 to 2 percent slopes</td>
<td>Moderately well drained</td>
<td>Moderately low to moderately high</td>
<td>Terraces, alluvial fans</td>
<td>Loam, clay, clay loam, sandy clay loam, gravelly clay loam</td>
<td>No</td>
</tr>
<tr>
<td>YaA</td>
<td>Yolo loam, 0 to 2 percent slopes</td>
<td>Well drained</td>
<td>Moderately high</td>
<td>Alluvial fan, flood plains</td>
<td>Loam, stratified loam to silty clay loam</td>
<td>No</td>
</tr>
<tr>
<td>YeC</td>
<td>Yolo silty clay loam, 2 to 9 percent slopes</td>
<td>Well drained</td>
<td>Moderately high</td>
<td>Flood plains, alluvial fans</td>
<td>Silty clay loam, stratified loam</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: NRCS 2012

Additionally, a mosaic of serpentine soils was observed within the Garreston loam (GaA) soil type south of the SR 85/US 101 interchange in San Jose (CSC 2010; USFWS 1998). Serpentine soils are characterized by high levels of magnesium and low levels of nitrogen, phosphorous, and potassium.

2.6 Hydrology
The BSA spans the Palo Alto, South Santa Clara Valley, Coyote Creek, and Guadalupe River watersheds. With the exception of Coyote Creek and South Santa Clara Valley, these watersheds drain the Santa Cruz Mountains into the southern and western sides of the Santa Clara Valley. Water flows onto the alluvial plain to the north and east of the Coast range and into San Francisco Bay. Coyote Creek drains the western side of the Diablo Range which is located on the eastern side of the Santa Clara Valley, south and east of San Jose, into San Francisco Bay. The South Santa
Clara Valley watershed flows southwest out of the Diablo mountain range to the Pajaro River and out to the Pacific Ocean near Watsonville (Figure 3).

2.7 Limitations that May Influence Results
The jurisdictional delineation was conducted during the early spring (March) of 2012 after a relatively normal year for precipitation (Graph 1) in the San Jose area.

All surface waters that are exposed and observable were surveyed and delineated. Waters that were entirely contained within underground culverts for their entire extent within the BSA were not delineated in the field, but are included on the maps and accounted for in the delineation. These features were not delineated in the field due to lack of permission to enter (most extended far beyond the boundaries of the BSA). Because underground culverts were inaccessible, they could not be sized accurately, and therefore the approximate acreages occupied by these underground features were not estimated. The linear extent of each feature was estimated using the approximate position of the features as depicted in the NHD (CWUS-1 to CUWS-6 and CWUS-18). Due to missing blue-lines or incorrectly geo-referenced blue-lines in the NHD, the linear extent of some culverted waters of the U.S. (CWUS-7 to CWUS-17) were estimated based on the location of the upstream and downstream culvert openings as observed in the field or on aerial mapping.

In a few locations, freshwater wetlands were present within streams within the BSA. Wetland soils and hydrology for these in-stream wetlands were assumed based upon the presence of standing water within and around in-stream wetland vegetation.
Soil types of the BSA

- 120 - Aquic Xerorthents, bay mud subtratum, 0 to 2 percent slopes
- 131 - Urban land-Elpaloalto complex, 0 to 2 percent slopes
- 135 - Urban land-SanFrancisco Creek complex, 0 to 2 percent slopes, drained
- 145 - Urban land-Hangerone complex, 0 to 2 percent slopes, protected
- 150 - Urban land-Embarcadero complex, 0 to 2 percent slopes, drained
- 157 - Novato clay, 0 to 1 percent slopes, protected
- 165 - Urban land-Campbell complex, 0 to 2 percent slopes, protected
- 169 - Urban land-Elder complex, 0 to 2 percent slopes, protected
- 171 - Elder fine sandy loam, 0 to 2 percent slopes, rarely flooded
- 185 - Urban land - Bayshore complex, 0 to 2 percent slopes, drained
- 317 - Urban land-Cropley complex, 0 to 2 percent slopes

Image source: ESRI Topographic Basemap
Soil data source: United States Department of Agriculture (USDA)/Natural Resources Conservation Service (NRCS), 2010
Soils in the BSA

Soil types of the BSA

101 - Urban land, 0 to 2 percent slopes, basins

102 - Urban land, 0 to 2 percent slopes, alluvial fans

130 - Urban land-Still complex, 0 to 2 percent slopes

131 - Urban land-Epaloalto complex, 0 to 2 percent slopes

135 - Urban land-Stevens Creek complex, 0 to 2 percent slopes

145 - Urban land-Hangerone complex, 0 to 2 percent slopes, drained

165 - Urban land-Campbell complex, 0 to 2 percent slopes, protected

170 - Urban land-Landelspark complex, 0 to 2 percent slopes

185 - Urban land - Bayshore complex, 0 to 2 percent slopes, drained

Image source: ESRI Topographic Basemap

Soil data source: United States Department of Agriculture (USDA)/Natural Resources Conservation Service (NRCS), 2010
Soil types of the BSA

- **101** - Urban land, 0 to 2 percent slopes, basins
- **130** - Urban land-Elopalo Alto complex, 0 to 2 percent slopes
- **131** - Urban land-Hangerone complex, 0 to 2 percent slopes, drained
- **145** - Urban land-Hangerone complex, 0 to 2 percent slopes, drained
- **146** - Hangerone clay loam, drained, 0 to 2 percent slopes
- **160** - Urban land-Clear Lake complex, 0 to 2 percent slopes
- **165** - Urban land-Campbell complex, 0 to 2 percent slopes, protected
- **166** - Campbell silt loam, 0 to 2 percent slopes, protected
- **167** - Elder fine sandy loam, 0 to 2 percent slopes, rarely flooded
- **171** - Elder fine sandy loam, 0 to 2 percent slopes, rarely flooded
- **172** - Canine Creek-Elder complex, 0 to 2 percent slopes
- **174** - Urban land-Canine Creek-Elder complex, 0 to 2 percent slopes
- **180** - Urban land-Newpark complex, 0 to 2 percent slopes
- **302** - Montara-Rock outcrop complex, 30 to 50 percent slopes
- **303** - Montara-Santerhill complex, 15 to 30 percent slopes
- **317** - Urban land-Cropley complex, 0 to 2 percent slopes

Image source: ESRI Topographic Basemap
Soil data source: United States Department of Agriculture (USDA)/Natural Resources Conservation Service (NRCS), 2010
Soil types of the BSA:

130 - Urban land-Still complex, 0 to 2 percent slopes
131 - Urban land-Elpaloalto complex, 0 to 2 percent slopes
165 - Urban land-Campbell complex, 0 to 2 percent slopes, protected
173 - Canine Creek-Elder complex, 0 to 2 percent slopes, rarely flooded
130 - Urban land-Montara complex, 15 to 30 percent slopes
131 - Montara-Rock outcrop complex, 30 to 50 percent slopes
130 - Montara-Gardenfield complex, 15 to 30 percent slopes
130 - Altamont complex, 15 to 30 percent slopes
165 - Urban land-Altamont complex, 30 to 50 percent slopes
300 - Urban land-Montara complex, 15 to 30 percent slopes
302 - Montara-Rock outcrop complex, 30 to 50 percent slopes
303 - Montara-Santerhill complex, 15 to 30 percent slopes
305 - Altamont-Altamont complex, 15 to 30 percent slopes
309 - Urban land-Altamont-Alo complex, 9 to 15 percent slopes
315 - Cropley clay, 0 to 2 percent slopes
317 - Urban land-Cropley complex, 0 to 2 percent slopes
AcE - Altamont clay, 15 to 30 percent slopes

Image source: ESRI Topographic Basemap
Soil data source: United States Department of Agriculture (USDA)/Natural Resources Conservation Service (NRCS), 2010
Biological Study Area (BSA)

Streams

AcE - Altamont clay, 15 to 30 percent slopes
ArA - Arbuckle gravelly loam, 0 to 2 percent slopes
CoB - Cortina very gravelly loam, 0 to 5 percent slopes
DaD - Diablo clay, 9 to 15 percent slopes
GaA - Garretson loam, gravel substratum, 0 to 2 percent slopes
InG2 - Inks rocky clay loam, 50 to 75 percent slopes, eroded
LrC - Los Robles clay loam, 2 to 9 percent slopes
McB - Maxwell clay, 0 to 5 percent slopes
PoA - Pleasanton loam, 0 to 2 percent slopes
Rg - Riverwash
SbF3 - San Benito clay loam, 30 to 50 percent slopes, severely ero
SdA - San Ysidro loam, 0 to 2 percent slopes
W - WATER
YeC - Yolo silty clay loam, 2 to 9 percent slopes

Image source: ESRI Topographic Basemap
Soil data source: United States Department of Agriculture (USDA)/Natural Resource Conservation Service (NRCS), 2010
Figure 3
Watersheds and Streams in the BSA

- Coyote Creek Watershed
- Guadalupe River Watershed
- Palo Alto Watershed
- South Santa Clara Valley Watershed

Imagery source: Microsoft Bing Maps
3 Results

3.1 Summary of Results
The total area of potential waters of the U.S. delineated within the BSA is 4.27 acres (185,737 square feet). Of this acreage, 3.24 acres (140,665 square feet) are potential other waters of the U.S., and 1.03 acres (45,072 square feet) are potential wetlands. In addition 0.09 acre (3,570 square feet) of potential non-jurisdictional (isolated) wetlands were delineated in the BSA and two historic features, as indicated on old maps, were investigated and determined to be no longer present in the BSA.

The BSA contains 6,740 linear feet of culverts or other engineered structures that are either culverted throughout the length of the BSA or were inaccessible due to highway/roadway infrastructure within the BSA. Although these features were not delineated in the field due to lack of access and lack of entry permission (most extended far beyond the boundaries of the BSA), the features convey potentially jurisdictional waters of the U.S. and are therefore potentially jurisdictional.

Two historic waters of the United States (HWUS) were identified within the BSA. Although these features are defined as water bodies that are depicted on historic topographic maps and the NHD they were not identifiable as such during the field surveys.

Table 4 summarizes the area and length of each potential jurisdictional waters of the U.S. delineated in the BSA. Wetland features are identified by the water feature in which they are found, where applicable. All waters of the U.S. and potential non-jurisdictional features are mapped in Appendix A at a scale of 1 inch equals 500 feet and a scale of 1 inch equals 200 feet.

Table 4: Potentially Jurisdictional Waters of the United States in the Biological Study Area

<table>
<thead>
<tr>
<th>Feature Type</th>
<th>Length (feet)</th>
<th>Delineated Area (Square feet)</th>
<th>Delineated Area (Acres)</th>
<th>Map Sheet Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Waters of the U.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CWUS-1 Permanente Creek – culverted water</td>
<td>209</td>
<td>2,487</td>
<td>0.06</td>
<td>Sheets 5 and 43</td>
</tr>
<tr>
<td>WUS-1 Coyote Creek</td>
<td>186</td>
<td>17,845</td>
<td>0.41</td>
<td>Sheets 36 and 37 and 69</td>
</tr>
<tr>
<td>WUS-2 Ephemeral drainage</td>
<td>506</td>
<td>1,533</td>
<td>0.04</td>
<td>Sheets 36 and 68</td>
</tr>
<tr>
<td>WUS-3 Intermittent drainage – canal</td>
<td>621</td>
<td>3,447</td>
<td>0.08</td>
<td>Sheets 35 and 36 and 68</td>
</tr>
</tbody>
</table>
### Table 4: Potentially Jurisdictional Waters of the United States in the Biological Study Area

<table>
<thead>
<tr>
<th>Feature Type</th>
<th>Length (feet)</th>
<th>Delineated Area (Square feet)</th>
<th>Delineated Area (Acres')</th>
<th>Map Sheet Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>WUS-4 Intermittent stream</td>
<td>37</td>
<td>140</td>
<td>&lt;0.01</td>
<td>Sheets 34 and 66</td>
</tr>
<tr>
<td>WUS-5 Ephemeral drainage</td>
<td>72</td>
<td>111</td>
<td>&lt;0.01</td>
<td>Sheets 34 and 65</td>
</tr>
<tr>
<td>WUS-6 Ephemeral drainage</td>
<td>54</td>
<td>67</td>
<td>&lt;0.01</td>
<td>Sheets 34 and 65</td>
</tr>
<tr>
<td>WUS-7 Ephemeral drainage</td>
<td>51</td>
<td>159</td>
<td>&lt;0.01</td>
<td>Sheets 34 and 65</td>
</tr>
<tr>
<td>WUS-8 Ephemeral drainage</td>
<td>34</td>
<td>144</td>
<td>&lt;0.01</td>
<td>Sheets 34 and 65</td>
</tr>
<tr>
<td>WUS-9 Ephemeral drainage</td>
<td>44</td>
<td>104</td>
<td>&lt;0.01</td>
<td>Sheets 34 and 65</td>
</tr>
<tr>
<td>WUS-10 Ephemeral drainage</td>
<td>25</td>
<td>188</td>
<td>&lt;0.01</td>
<td>Sheets 34 and 65</td>
</tr>
<tr>
<td>WUS-11 Intermittent stream</td>
<td>217</td>
<td>369</td>
<td>0.01</td>
<td>Sheets 33 and 63</td>
</tr>
<tr>
<td>WUS-12 Coyote Creek</td>
<td>362</td>
<td>16,124</td>
<td>0.37</td>
<td>Sheets 29 and 58</td>
</tr>
<tr>
<td>WUS-13 Ephemeral drainage to Coyote Creek</td>
<td>153</td>
<td>1,113</td>
<td>0.03</td>
<td>Sheets 29 and 58</td>
</tr>
<tr>
<td>WUS-14 Coyote Creek</td>
<td>251</td>
<td>13,642</td>
<td>0.31</td>
<td>Sheets 24 and 57</td>
</tr>
<tr>
<td>WUS-15 Intermittent drainage ditch</td>
<td>30</td>
<td>85</td>
<td>&lt;0.01</td>
<td>Sheets 24 and 56</td>
</tr>
<tr>
<td>WUS-16 Ephemeral drainage ditch</td>
<td>79</td>
<td>46</td>
<td>&lt;0.01</td>
<td>Sheets 24 and 56</td>
</tr>
<tr>
<td>WUS-17 Silver Creek</td>
<td>165</td>
<td>8,643</td>
<td>0.20</td>
<td>Sheets 16 and 53</td>
</tr>
<tr>
<td>WUS-18 Coyote Creek</td>
<td>212</td>
<td>9,777</td>
<td>0.22</td>
<td>Sheets 16 and 53</td>
</tr>
<tr>
<td>WUS-19 Guadalupe River</td>
<td>292</td>
<td>23,897</td>
<td>0.55</td>
<td>Sheets 13 and 51</td>
</tr>
<tr>
<td>WUS-20 San Tomas Aquino Creek</td>
<td>183</td>
<td>6,055</td>
<td>0.14</td>
<td>Sheets 12 and 50</td>
</tr>
<tr>
<td>WUS-21 Calabazas Creek – intermittent drainage canal – concrete</td>
<td>221</td>
<td>3,270</td>
<td>0.08</td>
<td>Sheets 11 and 49</td>
</tr>
<tr>
<td>WUS-22 Mathilda Channel</td>
<td>169</td>
<td>2,105</td>
<td>0.05</td>
<td>Sheets 9 and 47</td>
</tr>
<tr>
<td>WUS-23 Stevens Creek</td>
<td>256</td>
<td>7,238</td>
<td>0.17</td>
<td>Sheets 7 and 46</td>
</tr>
<tr>
<td>WUS-24 Stevens Creek</td>
<td>236</td>
<td>5,848</td>
<td>0.13</td>
<td>Sheets 6 and 44</td>
</tr>
<tr>
<td>WUS-25 Intermittent stream</td>
<td>29</td>
<td>242</td>
<td>0.01</td>
<td>Sheets 35 and 67</td>
</tr>
<tr>
<td>WUS-26 Intermittent stream</td>
<td>51</td>
<td>691</td>
<td>0.02</td>
<td>Sheets 35 and 67</td>
</tr>
<tr>
<td>WUS-27 Ephemeral drainage</td>
<td>45</td>
<td>237</td>
<td>0.01</td>
<td>Sheets 34 and 66</td>
</tr>
<tr>
<td>WUS-28 Ephemeral drainage</td>
<td>94</td>
<td>356</td>
<td>0.01</td>
<td>Sheets 35 and 67</td>
</tr>
<tr>
<td>WUS-29 Ephemeral drainage</td>
<td>82</td>
<td>287</td>
<td>0.01</td>
<td>Sheets 35 and 67</td>
</tr>
<tr>
<td>WUS-30 Ephemeral drainage</td>
<td>22</td>
<td>106</td>
<td>&lt;0.01</td>
<td>Sheets 33 and 64</td>
</tr>
<tr>
<td>WUS-31 Intermittent stream</td>
<td>53</td>
<td>295</td>
<td>0.01</td>
<td>Sheets 32 and 62</td>
</tr>
<tr>
<td>WUS-32 Ephemeral Drainage</td>
<td>37</td>
<td>105</td>
<td>&lt;0.01</td>
<td>Sheets 36 and 69</td>
</tr>
<tr>
<td>WUS-33 Intermittent stream</td>
<td>23</td>
<td>91</td>
<td>&lt;0.01</td>
<td>Sheets 34 and 66</td>
</tr>
<tr>
<td>WUS-34 Matadero Creek</td>
<td>162</td>
<td>6,488</td>
<td>0.15</td>
<td>Sheets 2 and 41</td>
</tr>
<tr>
<td>WUS-35 Adobe Creek</td>
<td>166</td>
<td>6,596</td>
<td>0.15</td>
<td>Sheets 3 and 42</td>
</tr>
<tr>
<td>WUS-36 Permanente Creek</td>
<td>56</td>
<td>734</td>
<td>0.02</td>
<td>Sheets 5 and 43</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>5,485</strong></td>
<td><strong>140,665</strong></td>
<td><strong>3.24</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Wetlands of the U.S.**

| WWUS-1 Cattail-willow wetland – in drainage ditch     | 85            | 933                           | 0.02                     | Sheets 36 and 68 |
| WWUS-2 Cattail wetland – in canal                     | 67            | 640                           | 0.01                     | Sheets 36 and 68 |
| WWUS-3 Cattail wetland – perennial in-stream         | 170           | 1,588                         | 0.04                     | Sheets 34 and 66 |
| WWUS-4 Cattail wetland – in-stream                   | 12            | 106                           | <0.01                    | Sheets 33 and 63 |
| WWUS-5 Freshwater marsh –                            | 151           | 2,753                         | 0.06                     | Sheets 33 and 63 |
Table 4: Potentially Jurisdictional Waters of the United States in the Biological Study Area

<table>
<thead>
<tr>
<th>Feature Type</th>
<th>Length (feet)</th>
<th>Delineated Area (Square feet)</th>
<th>Delineated Area (Acres)</th>
<th>Map Sheet Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>perennial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WWUS-6 Coyote Creek – perennial intestine</td>
<td>56</td>
<td>2,077</td>
<td>0.05</td>
<td>Sheets 29 and 58</td>
</tr>
<tr>
<td>WWUS-7 Coyote Creek – perennial intestine</td>
<td>531</td>
<td>19,357</td>
<td>0.44</td>
<td>Sheets 29 and 58</td>
</tr>
<tr>
<td>WWUS-8 Cattail-willow wetland – drains to Coyote Creek – in ditch</td>
<td>899</td>
<td>8,612</td>
<td>0.20</td>
<td>Sheets 23 and 55</td>
</tr>
<tr>
<td>WWUS-9 Cattail-willow wetland – in ditch</td>
<td>37</td>
<td>438</td>
<td>0.01</td>
<td>Sheets 24 and 56</td>
</tr>
<tr>
<td>WWUS-10 Seasonal bulrush wetland – to Guadalupe River</td>
<td>34</td>
<td>660</td>
<td>0.02</td>
<td>Sheets 13 and 51</td>
</tr>
<tr>
<td>WWUS-11 Cattail-bulrush wetland – perennial in-stream – Guadalupe</td>
<td>60</td>
<td>1,825</td>
<td>0.04</td>
<td>Sheets 13 and 51</td>
</tr>
<tr>
<td>WWUS-12 Perennial freshwater wetland</td>
<td>714</td>
<td>5,930</td>
<td>0.14</td>
<td>Sheets 29 and 59</td>
</tr>
<tr>
<td>WWUS-13 Perennial freshwater cattail wetland</td>
<td>18</td>
<td>153</td>
<td>&lt;0.01</td>
<td>Sheets 29 and 59</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>2,834</strong></td>
<td><strong>45,072</strong></td>
<td><strong>1.03</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Potential Waters and Wetlands of the U.S.</strong></td>
<td><strong>8,319</strong></td>
<td><strong>185,737</strong></td>
<td><strong>4.27</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** URS Field Survey 2012

1. Square feet are rounded to the nearest foot
2. Acres are rounded to the nearest hundredth of an acre

CWUS = culverted waters of the United States
WUS = other waters of the United States
WWUS = wetland waters of the United States

Table 5 provides the lengths of the potentially jurisdictional culverted waters of the U.S. in the BSA that were not delineated. All culverted waters in the BSA are shown on the maps in Appendix A.

Table 5: Potentially Jurisdictional Culverted Waters of the United States in the Biological Study Area

<table>
<thead>
<tr>
<th>Feature Type</th>
<th>Length (feet)</th>
<th>Appendix A Map Sheet Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWUS-2 Culverted Waters</td>
<td>213.17</td>
<td>Sheets 7 and 45</td>
</tr>
<tr>
<td>CWUS-3 Culverted Waters</td>
<td>199.59</td>
<td>Sheets 9 and 47</td>
</tr>
<tr>
<td>CWUS-4 Culverted Waters</td>
<td>260.65</td>
<td>Sheets 31 and 61</td>
</tr>
<tr>
<td>CWUS-5 Culverted Waters</td>
<td>878.95</td>
<td>Sheets 32 and 62</td>
</tr>
<tr>
<td>CWUS-6 Culverted Waters</td>
<td>742.96</td>
<td>Sheets 33 and 63</td>
</tr>
<tr>
<td>CWUS-7 Culverted Waters</td>
<td>322.56</td>
<td>Sheets 33 and 64</td>
</tr>
<tr>
<td>CWUS-8 Culverted Waters</td>
<td>266.97</td>
<td>Sheets 34 and 65</td>
</tr>
<tr>
<td>CWUS-9 Culverted Waters</td>
<td>325.87</td>
<td>Sheets 34 and 65</td>
</tr>
<tr>
<td>CWUS-10 Culverted Waters</td>
<td>342.84</td>
<td>Sheets 34 and 65</td>
</tr>
<tr>
<td>CWUS-11 Culverted Waters</td>
<td>955.80</td>
<td>Sheets 34 and 66</td>
</tr>
</tbody>
</table>
Table 5: Potentially Jurisdictional Culverted Waters of the United States in the Biological Study Area

<table>
<thead>
<tr>
<th>Feature Type</th>
<th>Length (feet)</th>
<th>Appendix A Map Sheet Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWUS-12 Culverted Waters</td>
<td>316.62</td>
<td>Sheets 35 and 67</td>
</tr>
<tr>
<td>CWUS-13 Culverted Waters</td>
<td>331.78</td>
<td>Sheets 35 and 67</td>
</tr>
<tr>
<td>CWUS-14 Culverted Waters</td>
<td>353.01</td>
<td>Sheets 35 and 67</td>
</tr>
<tr>
<td>CWUS-15 Culverted Waters</td>
<td>443.84</td>
<td>Sheets 36 and 68</td>
</tr>
<tr>
<td>CWUS-16 Culverted Waters</td>
<td>247.95</td>
<td>Sheets 36 and 68</td>
</tr>
<tr>
<td>CWUS-17 Culverted Waters</td>
<td>280.71</td>
<td>Sheets 36 and 69</td>
</tr>
<tr>
<td>CWUS-18 Culverted Waters</td>
<td>257.14</td>
<td>Sheets 10 and 48</td>
</tr>
<tr>
<td><strong>Total Potential Culverted Waters of the United States</strong></td>
<td><strong>6,740.41</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: USGS 2013

1. The length in linear feet for each feature was estimated based on aerial maps and the NHD.
2. In Appendix A, there are two sets of map sheets that show each feature; the first sheet number listed in Table 5 shows the feature at a scale of 1 inch equals 500 feet, and the second sheet number shows the feature at a scale of 1 inch equals 100 feet (a more detailed view).

CWUS = Culverted water of the United States

Table 6 provides the lengths of the potential non-jurisdictional wetlands in the BSA that were delineated. All potentially non-jurisdictional wetlands in the BSA are shown on the maps in Appendix A.

Table 6: Potentially Non-Jurisdictional Wetlands in the Biological Study Area

<table>
<thead>
<tr>
<th>Feature Type</th>
<th>Length (feet)</th>
<th>Delineated Area (Square feet)</th>
<th>Delineated Area (Acres)</th>
<th>Appendix A Map Sheet Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>NJ-WL-1 Cattail wetland – isolated</td>
<td>199</td>
<td>841</td>
<td>0.02</td>
<td>Sheets 24 and 56</td>
</tr>
<tr>
<td>NJ-WL-2 Seasonal wetland – drainage ditch – isolated</td>
<td>66</td>
<td>261</td>
<td>0.01</td>
<td>Sheets 24 and 56</td>
</tr>
<tr>
<td>NJ-WL-3 Cattail-bulrush wetland ditch – isolated</td>
<td>141</td>
<td>789</td>
<td>0.02</td>
<td>Sheets 18 and 54</td>
</tr>
<tr>
<td>NJ-WL-4 Seep-fed cattail wetland – isolated</td>
<td>228</td>
<td>1,285</td>
<td>0.03</td>
<td>Sheets 15 and 52</td>
</tr>
<tr>
<td>NJ-WL-5 Seep-fed cattail wetland – isolated</td>
<td>75</td>
<td>394</td>
<td>0.01</td>
<td>Sheets 15 and 52</td>
</tr>
<tr>
<td><strong>Total Potential Non-Jurisdictional Waters and Wetlands of the U.S.</strong></td>
<td><strong>709</strong></td>
<td><strong>3,570</strong></td>
<td><strong>0.09</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: URS Field Survey 2012

1. Square feet are rounded to the nearest foot
2. Acres are rounded to the nearest hundredth of an acre
3. In Appendix A, there are two sets of map sheets that show each feature; the first sheet number listed in Table 5 shows the feature at a scale of 1 inch equals 500 feet, and the second sheet number shows the feature at a scale of 1 inch equals 100 feet (a more detailed view).

CWUS = culverted waters of the United States
WUS = other waters of the United States
WWUS = wetland waters of the United States
3.2 Potential Jurisdictional Waters of the United States

Potential jurisdictional waters of the U.S. in the BSA include perennial, intermittent, and ephemeral drainages and wetlands. The estimated areas of the delineated potential jurisdictional waters of the U.S. are listed in Table 4. The estimated lengths of the potentially jurisdictional culverted waters of the U.S. that were not delineated are listed in Table 5. All estimates of resources presented in this report are subject to change pending USACE official review and final jurisdictional determination.

3.2.1 Other Waters of the United States

3.2.1.1 Features Delineated in the Field

Thirty-six other waters of the U.S. features equaling 3.24 acres were mapped in the BSA. These include culverted other waters that were measured in the field.

Culverted Water – Permanente Creek (CWUS-1): This culverted water (0.06 acre, 2,487 square feet) is a 12-foot-square box culvert that conveys Permanente Creek under US 101 (see Appendix A, sheets 5 and 43; Appendix C, photograph 1).

Coyote Creek (WUS-1): This perennial stream (0.41 acre, 17,845 square feet) is the southernmost of four crossings of US 101 over Coyote Creek within the BSA. A Fremont cottonwood (Populus fremontii) riparian forest shades the creek at this location (see Appendix A, sheets 36, 37 and 69; Appendix C, photographs 2 and 3).

Ephemeral Drainage (WUS-2): This ephemeral drainage (0.04 acre, 1,533 square feet) is west of US 101 and WWUS-1 north of the US 101/Cochrane Road interchange and drains water to Coyote Creek (see Appendix A, sheets 36 and 68).

Intermittent Drainage – Canal (WUS-3): This intermittent drainage (0.08 acre, 3,447 square feet) carries water northward along the west side of the Santa Clara Valley. In the BSA, the canal is west of US 101 and north of the Cochrane Road interchange (see Appendix A, sheets 35, 36 and 68).

Intermittent Stream (WUS-4): This intermittent stream (<0.01 acre, 140 square feet) is at the east end of a drainage on the east side of the US 101/Coyote Creek Golf Drive interchange (see Appendix A, sheets 34 and 66).

Ephemeral Drainage (WUS-5): This ephemeral drainage (<0.01 acre, 111 square feet) confluences with WUS-6 on the east side of US 101 north of the US 101/Coyote Creek Golf Drive interchange. Along the banks of the drainage is Mt. Hamilton fountain thistle (Cirsium fontinale) (see Appendix A, sheets 34 and 65).
Ephemeral Drainage (WUS-6): This ephemeral drainage (<0.01 acre, 67 square feet) is on the east side of US 101 north of the US 101/Coyote Creek Golf Drive interchange. The stream drains the hills east of the BSA (see Appendix A, sheets 34 and 65).

Ephemeral Drainage (WUS-7): This ephemeral drainage (<0.01 acre, 159 square feet) is on the west side of US 101 and east of the US 101/Coyote Creek Golf Drive interchange and is a continuation of WUS-6 (see Appendix A, sheets 34 and 65).

Ephemeral Drainage (WUS-8): This ephemeral drainage (<0.01 acre, 144 square feet) is on the west side of US 101 east of the US 101/Coyote Creek Golf Drive interchange. A coast live oak (*Quercus agrifolia*) riparian woodland shades this drainage (see Appendix A, sheets 34 and 65).

Ephemeral Drainage (WUS-9): This ephemeral drainage (<0.01 acre, 104 square feet) is on the east side of US 101 and is a continuation of WUS-8 on the west side of US 101, north of Coyote Creek Golf Drive. The stream drains the hills east of the BSA (see Appendix A, sheets 34 and 65; Appendix C, photograph 4).

Ephemeral Drainage (WUS-10): This ephemeral drainage (<0.01 acre, 188 square feet) is on the west side of US 101 near the Coyote Creek Golf Course, north of the US 101/Coyote Creek Golf Drive interchange (see Appendix A, sheets 34 and 65).

Intermittent Stream (WUS-11): This intermittent stream (0.01 acre, 369 square feet) on the east side of US 101 south of Bailey Avenue connects two wetlands: WWUS-4 and WWUS-5 (see Appendix A, sheets 33 and 63).

Coyote Creek (WUS-12): This perennial stream (0.37 acre, 16,124 square feet) flows under US 101 at the US 101/SR 85 interchange in San Jose. The riparian corridor on either side of the bridge contained Fremont cottonwood, red willow (*Salix laevigata*), and coast live oak (see Appendix A, sheets 29 and 58; Appendix C, photographs 5 and 6).

Ephemeral Drainage to Coyote Creek (WUS-13): This feature (0.03 acre, 1,113 square feet) drains the west side of Coyote Creek just east of the US 101 overcrossing at Bernal Road. The channel lies within the floodplain of Coyote Creek. A canopy of Fremont cottonwood trees and arroyo willows (*Salix lasiolepis*) shade this drainage (see Appendix A, sheets 29 and 58; Appendix C, photograph 7).
**Coyote Creek (WUS-14):** This perennial stream (0.31 acre, 13,642 square feet) crosses under a US 101 four-span bridge and includes riparian trees such as Fremont cottonwoods and arroyo willows (see Appendix A, sheets 24 and 57; Appendix C, photographs 8 and 9).

**Intermittent Drainage Ditch (WUS-15):** This intermittent ditch (<0.01 acre, 85 square feet) drains water between two wetland areas, WWUS-8 and WWUS-9, in a ditch on the southbound side of US 101 north of Hellyer Avenue (see Appendix A, sheets 24 and 56).

**Ephemeral Drainage Ditch (WUS-16):** This ephemeral ditch (<0.01 acre, 46 square feet) is on the southbound side of US 101 north of Hellyer Avenue (see Appendix A, sheets 24 and 56).

**Silver Creek (WUS-17):** This channelized, intermittent stream (0.20 acre, 8,643 square feet) flows through the BSA north of the McKee Road interchange (see Appendix A, sheets 16 and 53; Appendix C, photograph 10).

**Coyote Creek (WUS-18):** This perennial stream (0.22 acre, 9,777 square feet) crosses US 101 south of the East Taylor Street/Mabury Road overcrossing. The creek has a Fremont cottonwood riparian forest along either side of the overcrossing (see Appendix A, sheets 16 and 53; Appendix C).

**Guadalupe River (WUS-19):** This perennial stream (0.55 acre, 23,897 square feet) crosses US 101 in a concrete and riprap-armored channel just north of the SR 87 interchange under a four-span bridge (see Appendix A, sheets 13 and 51; Appendix C, photographs 11 and 12).

**San Tomas Aquino Creek (WUS-20):** This perennial stream (0.14 acre, 6,055 square feet) flows under US 101 in a straight concrete channel between Great America Parkway and San Tomas Expressway (see Appendix A, sheets 12 and 50; Appendix C, photograph 13).

**Calabazas Creek – Intermittent Drainage Canal – Concrete (WUS-21):** This intermittent drainage (0.08 acre, 3,270 square feet) flows in a straight concrete channel underneath US 101 between Lawrence Expressway and Great America Parkway (see Appendix A, sheets 11 and 49).
Mathilda Channel (WUS-22): This intermittent drainage (0.05 acre, 2,105 square feet) flows in a straight concrete channel underneath US 101 east of the SR 237 interchange (see Appendix A, sheets 9 and 47; Appendix C, photograph 14).

Stevens Creek (WUS-23): This perennial stream (0.17 acre, 7,238 square feet) crosses under SR 85 south of the US 101 interchange in Mountain View in a concrete-lined channel (see Appendix A, sheets 7 and 46).

Stevens Creek (WUS-24): This perennial stream (0.13 acre, 5,848 square feet) crosses U.S. 101 in a concrete channel just south of the SR 85 interchange (see Appendix A, sheets 6 and 44).

Intermittent Stream (WUS-25): This intermittent stream (0.01 acre, 242 square feet) is on the west side of US 101 south of the US 101/Coyote Creek Golf Drive interchange. The stream is shaded by arroyo willow trees (see Appendix A, sheets 35 and 67).

Intermittent Stream (WUS-26): This intermittent stream (0.02 acre, 691 square feet) is on the west side of US 101 south of the US 101/Coyote Creek Golf Drive interchange. Mt. Hamilton fountain thistle occurs in this drainage (see Appendix A, sheets 35 and 67; Appendix C, photograph 15).

Ephemeral Drainage (WUS-27): This ephemeral drainage (0.01 acre, 237 square feet) is on the east side of US 101 south of the US 101/Coyote Creek Golf Drive interchange. Mt Hamilton fountain thistle occurs along the drainage (see Appendix A, sheets 34 and 66; Appendix C, photographs 16 and 17).

Ephemeral Drainage (WUS-28): This ephemeral drainage (0.01 acre, 356 square feet) is on the east side of the BSA south of the US 101/ Coyote Creek Golf Drive interchange (see Appendix A, sheets 35 and 67; Appendix C, photograph 18).

Ephemeral Drainage (WUS-29): This ephemeral drainage (0.01 acre, 287 square feet) is on the west side of US 101 (continuation of WUS-28) south of the US 101/ Coyote Creek Golf Drive interchange (see Appendix A, sheets 35 and 67).

Ephemeral Drainage (WUS-30): This ephemeral drainage (<0.01 acre, 106 square feet) is at the end of a culvert on the west side of US 101 near the Coyote Creek Golf Course, north of the US 101/Coyote Creek Golf Drive interchange (see Appendix A, sheets 33 and 64).
Results

Intermittent Stream (WUS-31): This intermittent stream (0.01 acre, 295 square feet) drains the hills to the east of the BSA south of the US 101/Bailey Avenue interchange and enters a culvert east of US 101. A Fremont cottonwood riparian forest shades the stream (see Appendix A, sheets 32 and 62; Appendix C, photograph 19).

Ephemeral Drainage (WUS-32): This ephemeral drainage (<0.01 acre, 105 square feet) is on the west side of US 101 north of the US 101/Cochrane Road interchange (see Appendix A, sheets 36 and 69).

Intermittent Stream (WUS-33): This intermittent stream (<0.01 acre, 91 square feet) is on the west end of a drainage on the east side of the US 101/Coyote Creek Golf Drive interchange. Arroyo willows shaded the drainage (see Appendix A, sheets 34 and 66).

Matadero Creek (WUS-34): This perennial stream (0.15 acre, 6,488 square feet) flows through the BSA in an armored channel south of Oregon Expressway (see Appendix A, sheets 2 and 41).

Adobe Creek (WUS-35): This perennial stream (0.15 acre, 6,596 square feet) crosses the BSA in a concrete channel north of the San Antonio Road interchange (see Appendix A, sheets 3 and 42).

Permanente Creek (WUS-36): This perennial stream (0.02 acre, 734 square feet) is south of the Amphitheatre Parkway interchange and is concrete lined on both sides of US 101 (see Appendix A, sheets 5 and 43).

3.2.1.2 Features Delineated Based on Aerial Interpretation of Maps and the NHD

Culverted Water (CWUS-2): This culverted water (213.17 linear feet) flows under SR 85 between Moffett Boulevard and Middlefield Road (see Appendix A, sheets 7 and 45).

Culverted Water (CWUS-3): This culverted water (199.59 linear feet) flows under US 101 just south of WUS-22 (see Appendix A, sheets 9 and 47).

Culverted Water (CWUS-4): This culverted water (260.65 linear feet) flows under US 101 at Coyote Ranch Road (see Appendix A, sheets 31 and 61).
Culverted Water (CWUS-5): This culverted water (878.95 linear feet) is east of the Bailey Avenue overcrossing where an unnamed tributary to Coyote Creek flows along the east side of US 101 (see Appendix A, sheets 32 and 62).

Culverted Water (CWUS-6): This culverted water (742.96 linear feet) is south of the Bailey Avenue overcrossing where an unnamed tributary to Coyote Creek flows under US 101 (see Appendix A, sheets 33 and 63).

Culverted Water (CWUS-7): This culverted water (322.56 linear feet) is south of the Bailey Avenue overcrossing where an unnamed tributary to Coyote Creek flows under US 101 (see Appendix A, sheets 33 and 64).

Culverted Water (CWUS-8): This culverted water (266.97 linear feet) is south of the Bailey Avenue overcrossing where an unnamed tributary to Coyote Creek flows under US 101. It is located between WUS-10 and the upstream culvert opening that is located outside of the BSA (see Appendix A, sheets 34 and 65).

Culverted Water (CWUS-9): This culverted water (325.87 linear feet) is south of the Bailey Avenue overcrossing where an unnamed tributary to Coyote Creek flows under US 101. It is located between WUS-8 and WUS-9 (see Appendix A, sheets 34 and 65).

Culverted Water (CWUS-10): This culverted water (342.84 linear feet) is south of the Bailey Avenue overcrossing where an unnamed tributary to Coyote Creek flows under US 101. It is located between the confluence of WUS-5 and WUS-6 and WUS-7 (see Appendix A, sheets 34 and 65).

Culverted Water (CWUS-11): This culverted water (955.80 linear feet) is south of the Coyote Creek Golf Drive overcrossing where an unnamed tributary to Coyote Creek flows under US 101. It is located between WUS-27 and the downstream culvert opening that is located outside of the BSA (see Appendix A, sheets 34 and 66).

Culverted Water (CWUS-12): This culverted water (316.62 linear feet) is south of the Coyote Creek Golf Drive overcrossing where an unnamed tributary to Coyote Creek flows under US 101. It is located between WUS-28 and WUS-29 (see Appendix A, sheets 35 and 67).

Culverted Water (CWUS-13): This culverted water (331.78 linear feet) is south of the Coyote Creek Golf Drive overcrossing where an unnamed tributary to Coyote...
Creek flows under US 101. It is located between WUS-26 and the upstream culvert opening that was not delineated in the BSA (see Appendix A, sheets 35 and 67). Based on field observations, there were no distinguishable features that could be delineated adjacent to the culvert. It appeared the undelineated culverted water collects sheet flow that is then culverted under US 101 and flows into Coyote Creek as an ephemeral drainage.

**Culverted Water (CWUS-14):** This culverted water (353.01 linear feet) is south of the Coyote Creek Golf Drive overcrossing where an unnamed tributary to Coyote Creek flows under US 101. It is located between WUS-25 and the upstream culvert opening that is located outside of the BSA (see Appendix A, sheets 35 and 67).

**Culverted Water (CWUS-15):** This culverted water (443.84 linear feet) is south of the Coyote Creek Golf Drive overcrossing where an unnamed tributary to Coyote Creek flows under US 101. It is located between WWUS-2 and the upstream culvert opening that is located outside of the BSA (see Appendix A, sheets 36 and 68).

**Culverted Water (CWUS-16):** This culverted water (247.95 linear feet) is south of the Coyote Creek Golf Drive overcrossing where an unnamed tributary to Coyote Creek flows under US 101. It is located between WWUS-1 and the upstream culvert opening that is located outside of the BSA (see Appendix A, sheets 36 and 68).

**Culverted Water (CWUS-17):** This culverted water (280.71 linear feet) is south of the Coyote Creek Golf Drive overcrossing where an unnamed tributary to Coyote Creek flows under US 101. It is located between WUS-32 and the upstream culvert opening that is located outside of the BSA (see Appendix A, sheets 36 and 69).

**Culverted Water (CWUS-18):** This culverted water (257.14 linear feet) flows under North Fair Oaks Avenue, north of the US 101/North Fair Oaks Avenue interchange (see Appendix A, Sheets 10 and 48).

### 3.2.2 Wetlands

Several freshwater wetlands are present within streams within the BSA. Wetland soils and hydrology for these in-stream wetlands were assumed based upon the presence of standing water within and around in-stream wetland vegetation. Additional wetlands are located in roadside ditches. Approximately 1.03 acres of potential jurisdictional wetlands occur in the BSA.
Cattail-Willow Wetland – In Drainage Ditch (WWUS-1): This wetland (0.02 acre, 933 square feet) is on the west side of US 101 north of the US 101/Cochrane Road interchange between a culvert and an ephemeral drainage (WUS-2). The wetland contained arroyo willow and cattails (*Typha latifolia*) (see Appendix A, sheets 36 and 68).

Cattail Wetland – In Canal (WWUS-2): This wetland (0.01 acre, 640 square feet) is in a canal on the west side of US 101 north of the US 101/Cochrane Road interchange. The wetland was composed of cattails and yellow monkey flower (*Mimulus guttatus*) (see Appendix A, sheets 36 and 68).

Cattail Wetland – Perennial In-Stream (WWUS-3): This wetland (0.04 acre, 1,588 square feet) is on the east side of the US 101/Coyote Creek Golf Drive interchange and connects intermittent streams WUS-4 and WUS-33 (see Appendix A, sheets 34 and 66; Appendix C, photographs 20 and 21).

Cattail Wetland – In-Stream (WWUS-4): This wetland (<0.01 acre, 106 square feet) is on the east side of US 101 south of the US 101/Bailey Avenue interchange. The wetland is dominated by cattails (see Appendix A, sheets 33 and 63; Appendix C, photograph 22).

Freshwater Marsh – Perennial (WWUS-5): This wetland (0.06 acre, 2,753 square feet) is composed of Mt. Hamilton fountain thistle, tall flatsedge (*Cyperus eragrostis*), and white hedge nettle (*Stachys albens*) and is on the east side of the BSA south of the US 101/Bailey Avenue interchange (see Appendix A, sheets 33 and 63; Appendix C, photograph 23).

Coyote Creek – Perennial In-Stream (WWUS-6): This wetland (0.05 acre, 2,077 square feet) is within the banks of Coyote Creek on the west side of US 101 south of the northbound US 101/westbound SR 85 interchange and is largely composed of red willow (see Appendix A, sheets 29 and 58).

Coyote Creek – Perennial In-Stream (WWUS-7): This wetland (0.44 acre, 19,357 square feet) is within the banks of Coyote Creek on the east side of US 101 south of the northbound US 101/westbound SR 85 interchange and is mostly composed of sandbar willow (*Salix exigua*) (see Appendix A, sheets 29 and 58; Appendix C, photograph 24).
Cattail-Willow Wetland – Drains to Coyote Creek – In Ditch (WWUS-8): This wetland (0.20 acre, 8,612 square feet) is located in a roadside ditch along the southbound side of US 101 north of Hellyer Avenue (see Appendix A, sheets 23 and 55).

Cattail-Willow Wetland – In Ditch (WWUS-9): This wetland (0.01 acre, 438 square feet) is in the roadside ditch along the southbound side of US 101 north of Hellyer Avenue and south of WWUS-8 (see Appendix A, sheets 24 and 56).

Seasonal Bulrush Wetland – To Guadalupe River (WWUS-10): This wetland (0.02 acre, 660 square feet) is on the north side of US 101 under the northbound SR 87 on-ramp to northbound US 101. The wetland is in a low spot between two culverts that connect to a stormwater system and to the Guadalupe River (see Appendix A, sheets 13 and 51).

Cattail-Bulrush Wetland – Perennial In-Stream – Guadalupe River – (WWUS-11): This wetland (0.04 acre, 1,825 square feet) is adjacent to Guadalupe River within the ordinary high water mark. The wetland was mostly composed of cattails and bulrush (*Scirpus americanus*) (see Appendix A, sheets 13 and 51).

Perennial Freshwater Wetland (WWUS-12): This wetland (0.14 acre, 5,930 square feet) occurs in a roadside ditch along the west side of US 101 near the Coyote Creek Freshwater Wetland Project just south of the US 101/SR 85 interchange in San Jose. The wetland consisted of a few inches of water covered with aquatic plants including common duckweed (*Lemna minor*), creeping water primrose (*Ludwigia peploides*), watercress (*Rorippa nasturtium-aquaticum*), and water fern (*Azolla filiculoides*). Along the edges of the wetland was nutsedge. This wetland is fed by runoff from the residential development on the east side of US 101, which flows in a culvert under US 101 to connect with the wetland (see Appendix A, sheets 29 and 59; Appendix C, photograph 26).

Perennial Freshwater Cattail Wetland (WWUS-13): This wetland (<0.01 acre, 153 square feet) is in a roadside ditch along the east side of US 101 near Metcalf Road. This wetland is fed by a drainage culvert from the nearby residential development. The wetland is composed of cattails (see Appendix A, sheets 29 and 59; Appendix C, photograph 27).
3.3 Potential Non-Jurisdictional Wetlands
Five wetland features in the BSA satisfy the three parameters (hydrology, hydric soils and hydric plant) described in the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) for jurisdictional wetlands (Table 6). However, based on evaluation in the field, these wetlands appear to lack a significant nexus to a TNW. Therefore, the features may be considered isolated and non-jurisdictional wetlands based on guidance from the Rapanos decision (see Section 1.3.2).

**Cattail Wetland – Isolated (NJ-WL-1):** This isolated wetland (0.02 acre, 841 square feet) is in a drainage ditch on the northbound side of US 101 north of Hellyer Avenue (see Appendix A, sheets 24 and 56).

**Seasonal Wetland – Drainage Ditch – Isolated (NJ-WL-2):** This isolated wetland (0.01 acre, 261 square feet) is in a drainage ditch within the loop ramp area of the southbound on-ramp to US 101 from Hellyer Avenue (see Appendix A, sheets 24 and 56).

**Cattail-Bulrush Wetland Ditch – Isolated (NJ-WL-3):** This isolated wetland (0.02 acre, 789 square feet) is in the median area of the US 101/I-280/I-680 interchange. The wetland is connected to a stormwater drain system with no apparent connection to a navigable water (see Appendix A, sheets 18 and 54).

**Seep-fed Cattail Wetland – Isolated (NJ-WL-4):** This isolated wetland (0.03 acre, 1,285 square feet) is in the median area between southbound US 101 and the southbound off-ramp to Oakland Road. The wetland is fed from seep water coming from the hillside (see Appendix A, sheets 15 and 52; Appendix C, photograph 27).

**Seep-fed Cattail Wetland – Isolated (NJ-WL-5):** This isolated wetland (0.01 acre, 394 square feet) is also in the median area between the southbound US 101 and the southbound off-ramp to Oakland Road. Like NJ-WL-4, this wetland is fed from seep water coming from the hillside (see Appendix A, sheets 15 and 52; Appendix C, photograph 28).

3.4 Historic Water Features
Two historic waters of the United States (HWUS) were identified within the BSA. Historic waters are defined as water bodies that are depicted on historic topographic maps and the NHD but were not identifiable as such during field surveys.
HWUS-1 was originally located east of the SR 85/US 101 interchange in San Jose (see Appendix A, sheets 29 and 58). Based on the NHD, it appears that this feature may have been an unnamed tributary to Coyote Creek. At present, there is no defined bed and bank at this location, and no indication of a channel. It appears that commercial development in the area may have altered topography and hydrology to such an extent that water no longer flows into or out of this area in a defined channel.

HWUS-2 was originally located northeast of the Metcalf Road overcrossing and flowed west through the BSA into Coyote Creek (see Appendix A, sheets 30 and 60). Based on an analysis of aerial photographs and the field survey, it appears this feature has been diverted outside of the BSA into a culvert, where it is conveyed southward.

### 3.5 Conclusion

Based upon the results of a delineation of waters of the U.S. in the project area, 4.27 acres of potentially jurisdictional waters of the U.S. were identified and mapped. This total includes 3.24 acres of potentially jurisdictional other waters of the U.S. and 1.03 acres of potentially jurisdictional wetlands that may fall under the jurisdiction of the USACE pursuant to Section 404 of the CWA. Approximately 0.09 acres of potentially non-jurisdictional wetlands were also identified and mapped in the BSA. The determination of these features as isolated and lacking a significant nexus with potentially jurisdictional features is documented on the Wetland Determination Forms included in Appendix B.
4 References


Appendix A  Potentially Jurisdictional Wetlands and Waters of the United States in the Biological Study Area

This appendix contains the following maps:

- Potentially Jurisdictional Wetlands and Waters of the United States in the BSA: The Index and Sheets 1 through 40 show the entire BSA and all of the wetlands and other waters of the U.S. at a scale of 1 inch equals 500 feet.

- Detail of Potentially Jurisdictional Wetlands and Waters of the United States in the BSA: Sheets 41 through 69 show the wetlands and other waters of the U.S. in the BSA at a scale of 1 inch equals 200 feet.
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Appendix A, Sheet 2
Mapped Waters and Wetlands in the BSA

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points

Project Area

Biological Study Area (BSA)
Appendix A, Sheet 3

Mapped Waters and Wetlands in the BSA

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.
Appendix A, Sheet 6

Caltrans
US 101 Express Lanes Project

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)

Map of Mapped Waters and Wetlands in the BSA

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 7
Mapped Waters and Wetlands in the BSA

Caltrans
US 101 Express Lanes Project

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)
Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.
Sample Points
Project Area
Biological Study Area (BSA)
Appendix A, Sheet 9

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)
Appendix A, Sheet 11

Mapped Waters and Wetlands in the BSA

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points

Project Area

Biological Study Area (BSA)
Appendix A, Sheet 12

Mapped Waters and Wetlands in the BSA

Caltrans
US 101 Express Lanes Project

Appendix A, Sheet 12

Sample Points
Project Area
Biological Study Area (BSA)

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 13

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 14

Caltrans
US 101 Express Lanes Project

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.
Sample Points
Project Area
Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps

Appendix A, Sheet 14
Mapped Waters and Wetlands in the BSA
Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.
Sample Points
Project Area
Biological Study Area (BSA)
Appendix A, Sheet 16

Mapped Waters and Wetlands in the BSA

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.
- Sample Points
- Project Area
- Biological Study Area (BSA)
Appendix A, Sheet 17

Mapped Waters and Wetlands in the BSA

Caltrans
US 101 Express Lanes Project

In the Project Area, the Biological Study Area (BSA) was delineated for this project. Mapped waters and wetlands within the BSA include:

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 18

Mapped Waters and Wetlands in the BSA

Caltrans
US 101 Express Lanes Project

Imagery source: Microsoft Bing Maps

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)
Caltrans
US 101 Express Lanes Project

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps
Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)
Appendix A, Sheet 21

Mapped Waters and Wetlands in the BSA

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 22

Mapped Waters and Wetlands in the BSA

Caltrans
US 101 Express Lanes Project

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 24

Mapped Waters and Wetlands in the BSA

Caltrans
US 101 Express Lanes Project

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 25

Caltrans
US 101 Express Lanes Project

mapped waters and wetlands in the BSA

potentially jurisdictional other waters of the U.S.
potentially jurisdictional wetland
potentially non-jurisdictional wetland
historic waters of the U.S.

sample points
project area
biological study area (BSA)

imagery source: Microsoft Bing Maps
Appendix A, Sheet 26

Caltrans
US 101 Express Lanes Project

Mapped Waters and Wetlands in the BSA

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)
Potentially jurisdictional other waters of the U.S.

Potentially jurisdictional wetland

Potentially non-jurisdictional wetland

Historic waters of the U.S.
Appendix A, Sheet 28

Caltrans
US 101 Express Lanes Project

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)
Appendix A, Sheet 29

Caltrans
US 101 Express Lanes Project

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points

Project Area

Biological Study Area (BSA)
Appendix A, Sheet 30

Caltrans
US 101 Express Lanes Project

Mapped Waters and Wetlands in the BSA

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 31

Mapped Waters and Wetlands in the BSA

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points

Project Area

Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 34

Potentially jurisdictional other waters of the U.S.

Potentially jurisdictional wetland

Potentially non-jurisdictional wetland

Historic waters of the U.S.

Sample Points

Project Area

Biological Study Area (BSA)
Appendix A, Sheet 35

Mapped Waters and Wetlands in the BSA

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points

Project Area

Biological Study Area (BSA)
Appendix A, Sheet 36

Caltrans
US 101 Express Lanes Project

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)
Appendix A, Sheet 38

Map of potentially jurisdictional waters and wetlands in the Biological Study Area (BSA) for the US 101 Express Lanes Project in Caltrans. The map includes:

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample points and project area are also marked on the map. Imagery source: Microsoft Bing Maps.
Appendix A, Sheet 39

Potentially jurisdictional other waters of the U.S.
Potentially jurisdictional wetland
Potentially non-jurisdictional wetland
Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps
Appendix A, Sheet 40

Mapped Waters and Wetlands in the BSA

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.

Sample Points
Project Area
Biological Study Area (BSA)

Imagery source: Microsoft Bing Maps
Overview

Area of Detail

1 INCH = 200 FEET

Potentially jurisdictional other waters of the U.S.
Potentially non-jurisdictional wetland
Historic waters of the U.S.
Biological Study Area (BSA)
Sample Points

Detail of Mapped Waters and Wetlands in the BSA

DECEMBER 2013
APPENDIX A: SHEET 42
Overview

Area of Detail

1 INCH = 200 FEET

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.
- Project Area
- Biological Study Area (BSA)
- Sample Points
Overview

Area of Detail

Path: L:\Projects\VTA_US101_Express\PaloAlto_MorganHill_28645266\Maps\MXD\Wetland Delineation\Appendix_A_Wetlands_Detail.mxd

Detail of Mapped Waters and Wetlands in the BSA

US 101 Express Lanes

DECEMBER 2013

APPENDIX A: SHEET 47

- Potentially jurisdictional other waters of the U.S.
- Potentially non-jurisdictional wetland
- Project Area
- Historic waters of the U.S.
- Biological Study Area (BSA)
- Sample Points
Overview

Area of Detail

- Potentially jurisdictional other waters of the U.S.
- Potentially non-jurisdictional wetland
- Project Area
- Historic waters of the U.S.
- Biological Study Area (BSA)
- Sample Points

Detail of Mapped Waters and Wetlands in the BSA

DECEMBER 2013

APPENDIX A: SHEET 49
Overview

Potential jurisdical wetland

Historic waters of the U.S.

Biological Study Area (BSA)

Sample Points

Detail of Mapped Waters and Wetlands in the BSA

DECEMBER 2013

APPENDIX A: SHEET 53
Overview

Area of Detail

Path: L:\Projects\VTA_US101_Express\PaloAlto_MorganHill_28645266\Maps\MXD\Wetland Delineation\Appendix_A_Wetlands_Detail.mxd
Overview

Area of Detail

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.
- Project Area
- Biological Study Area (BSA)
- Sample Points

Legend:

1 INCH = 200 FEET

Detail of Mapped Waters and Wetlands in the BSA

US 101 Express Lanes

DECEMBER 2013

APPENDIX A: SHEET 57
Overview

Area of Detail

1 INCH = 200 FEET

Detail of Mapped Waters and Wetlands in the BSA

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Historic waters of the U.S.
- Project Area
- Biological Study Area (BSA)
- Sample Points

DECEMBER 2013

APPENDIX A: SHEET 59
Overview

Area of Detail

- Potentially jurisdictional other waters of the U.S.
- Potentially jurisdictional wetland
- Potentially non-jurisdictional wetland
- Project Area
- Historic waters of the U.S.
- Biological Study Area (BSA)
- Sample Points

DECEMBER 2013
APPENDIX A: SHEET 63
Overview

Area of Detail

1 INCH = 200 FEET

- Potentially jurisdictional other waters of the U.S.
- Potentially non-jurisdictional wetland
- Project Area
- Historic waters of the U.S.
- Biological Study Area (BSA)
- Sample Points

Detail of Mapped Waters and Wetlands in the BSA

DECEMBER 2013

APPENDIX A: SHEET 67
Overview

Area of Detail

Detail of Mapped Waters and Wetlands in the BSA

Overview

1 INCH = 200 FEET

DECEMBER 2013
APPENDIX A: SHEET 69
Appendix B  Wetland Delineation Data Forms

Copies of the wetland delineation data sheets, forms that were prepared to support the determination of wetland areas and their boundaries, are provided in the following pages.
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Coyote Creek Rapanos Form
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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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
   State: CA   County/parish/borough: Santa Clara   City: Mountain View, Cupertino, Saratoga, Los Gatos and San Jose
   Center coordinates of site (lat/long in degree decimal format): Lat. 37.2765° N, Long. 122.0071° W
   Universal Transverse Mercator:
   Name of nearest waterbody: 
   Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: San Francisco Bay
   Name of watershed or Hydrologic Unit Code (HUC): Palo Alto Watershed
   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:
   Field Determination. Date(s): July 21, 2010; August 4, 2010; August 11, 2010; August 26, 2010; September 1, 2010

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]

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 0.37 acres.
      Wetlands: 0.31 acres.

   c. Limits (boundaries) of jurisdiction based on: Established by OHWM.
      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: .

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).
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 waterbody\(^4\) 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: 320 \text{ square miles}
       Drainage area: 320 \text{ square miles}
       Average annual rainfall: 15 inches
       Average annual snowfall: 0 inches

   (ii) Physical Characteristics:
       (a) Relationship with TNW:
           \checkmark Tributary flows directly into TNW.
           \square Tributary flows through Pick List tributaries before entering TNW.

           Project waters are 25-30 river miles from TNW.
           Project waters are Pick List river miles from RPW.
           Project waters are 20-25 aerial (straight) miles from TNW.
           Project waters are Pick List aerial (straight) miles from RPW.
           Project waters cross or serve as state boundaries. Explain: No.

\(^4\) Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
Identify flow route to TNW:\footnote{5} Coyote Creek flows under SR 85/US 101 interchange in the Project study area and then flows more than 20 miles through San Jose before confluencing with Mud slough and then emptying into San Francisco Bay. Tributary stream order, if known: Coyote Creek to Mud slough to San Francisco Bay.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☒ Natural ☐ Artificial (man-made). Explain: 
☐ Manipulated (man-altered). Explain: Coyote Creek as been altered by humans for agricultural and development. In the project study area the creek is shaded by the SR 85/101 intersection overpass and is confined by the bridge abutments and piers.

Tributary properties with respect to top of bank (estimate):
- Average width: 54 feet
- Average depth: 10 feet
- Average side slopes: \(4:1\) (or greater).

Primary tributary substrate composition (check all that apply):
- ☒ Silts
- ☐ Sands
- ☒ Cobble
- ☐ Gravel
- ☐ Bedrock
- ☐ Vegetation. Type % cover: 
- ☐ Other. Explain: 
- ☐ Concrete
- ☐ Muck

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: Fairly stable in channelized condition. Presence of run/riffle/pool complexes. Explain: There are riffle, run, pool complexes present. Tributary geometry: \textbf{Relatively straight} Tributary gradient (approximate average slope): \%

(c) Flow:

Tributary provides for: \textbf{Seasonal flow} Estimate average number of flow events in review area/year: \textbf{20 (or greater)} Describe flow regime: This stream is perennial with the flow regulated by upstream reservoirs (Anderson, Coyote). Other information on duration and volume: 

Surface flow is: \textbf{Discrete and confined}. Characteristics: The creek is confined under the SR 85 underpass by the levees and surrounding percolation ponds. Subsurface flow: \textbf{Unknown}. Explain findings: Likely subsurface flow under streambed but no tests were performed. ☐ Dye (or other) test performed: 

Tributary has (check all that apply):
- ☒ Bed and banks
- ☒ OHWM\footnote{6} (check all indicators that apply):
- ☐ clear, natural line impressed on the bank
- ☒ changes in the character of soil
- ☒ shelving
- ☒ vegetation matted down, bent, or absent
- ☒ leaf litter disturbed or washed away
- ☒ sediment deposition
- ☒ water staining
- ☒ other (list):
- ☐ Discontinuous OHWM.\footnote{7} Explain: 

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- ☐ High Tide Line indicated by:
- ☐ Mean High Water Mark indicated by:
- ☒ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

\footnote{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.

\footnote{6} A 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.

\footnote{7} Ibid.
(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: The creek color is clear.
Identify specific pollutants, if known: The creek is known to be impaired by mercury and diazinon and potentially for sediment.
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): Fremont cottonwood riparian corridor, approximately 200 feet wide.
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings: Habitat for federally listed Central California Coast Steelhead.
  - Fish/spawn areas. Explain findings: Fish habitat area.
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

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: 0.40 acres
  - Wetland type. Explain: Freshwater emergent wetlands.
  - Wetland quality. Explain:
- Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:
- Flow is: Perennial flow. Explain:
- Surface flow is: Discrete and confined
  - Characteristics: Flow in wetlands occurs from overflow and subsurface flow of Los Gatos Creek.
- Subsurface flow: Yes. Explain findings: Subsurface flow in wetland as determined by examination of soil sample pit.
  - 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 15-20 river miles from TNW.
- Project waters are 10-15 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: Water color is clear.
- Identify specific pollutants, if known: Same pollutants as creek; mercury.

(iii) Biological Characteristics. Wetland supports (check all that apply):
- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain: 30% spearmint; 20% Fremont cottonwood; 10% arroyo willow; 10% Common cattail.
- Habitat for:
  - Federally Listed species. Explain findings: Habitat for federally listed Central California Coast steelhead.
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings: Fish, invertebrates, reptiles, mammals, amphibians and birds.

3. Characteristics of all wetlands adjacent to the tributary (if any)
- All wetland(s) being considered in the cumulative analysis: 2
- Approximately (0.40) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWUS 6</td>
<td>Y</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>WWUS1</td>
<td>Y</td>
<td>0.03</td>
<td></td>
</tr>
</tbody>
</table>

Summarize overall biological, chemical and physical functions being performed: .

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):

1. 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: The creek was dry during surveys in August However there are physical indicators that show that the creek receives flow during the wet season.
Provide estimates for jurisdictional waters in the review area (check all that apply):
- Tributary waters: \( \text{linear feet width (ft)} \).
- Other non-wetland waters: \( \text{acres} \).

Identify type(s) of waters: .

3. Non-RPWs\(^8\) that flow directly or indirectly into TNWs.
- 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: \( \text{linear feet width (ft)} \).
- Other non-wetland waters: \( \text{acres} \).

Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.
- Wetlands directly abutting an 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: *Guadalupe River receives year round flow from upstream reservoirs.*

Provide acreage estimates for jurisdictional wetlands in the review area: 0.03 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 jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

7. Impoundments of jurisdictional waters.\(^9\)
- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
- 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).

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: .

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\(^8\)See Footnote # 3.
\(^9\)To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
\(^10\)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.
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.
- 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 sole 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): linear feet width (ft).
- 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.

SECTION IV: DATA SOURCES.

A. 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:  
- USDA Natural Resources Conservation Service Soil Survey. Citation:  
- National wetlands inventory map(s). Cite name:  
- State/Local wetland inventory map(s):  
- FEMA/FIRM maps:  
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)  
- Photographs: X Aerial (Name & Date): Microsoft Bing Maps, NAIP 2010.  
- or X Other (Name & Date): Site visit photographs August 2010.  
- Previous determination(s). File no. and date of response letter:  
- Applicable/supporting case law:  
- Applicable/supporting scientific literature:  
- Other information (please specify):  

B. ADDITIONAL COMMENTS TO SUPPORT JD:  

NJ-WL-1 Rapanos Form
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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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
   State: CA   County/parish/borough: Santa Clara   City: San Jose
   Center coordinates of site (lat/long in degree decimal format): Lat. 37.284565° N, Long. 121.809065° W. Universal Transverse Mercator:
   Name of nearest waterbody: Coyote Creek
   Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: NA
   Name of watershed or Hydrologic Unit Code (HUC): Coyote Creek Watershed
   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:
   Field Determination. Date(s): March 7, 8, 9, 15 and 16, 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 the past, or may be susceptible for use to transport interstate or foreign commerce.
   Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.
   There are no “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):  
      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 acres.
      Wetlands: acres.

   c. Limits (boundaries) of jurisdiction based on: Pick List
      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: See section III.F for explanation.

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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).
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 waterbody\(^4\) 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: \(\text{Pick List}\)
   Drainage area: \(\text{Pick List}\)
   Average annual rainfall: \(\text{inches}\)
   Average annual snowfall: \(\text{inches}\)

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   \(\square\) Tributary flows directly into TNW.
   \(\square\) Tributary flows through \(\text{Pick List}\) tributaries before entering TNW.
   Project waters are \(\text{Pick List}\) river miles from TNW.
   Project waters are \(\text{Pick List}\) river miles from RPW.
   Project waters are \(\text{Pick List}\) aerial (straight) miles from TNW.
   Project waters are \(\text{Pick List}\) aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain:  
   Identify flow route to TNW\(^5\):  
   Tributary stream order, if known:  

---

\(^4\) 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.
(b) General Tributary Characteristics (check all that apply):

**Tributary is:**
- Natural
- Artificial (man-made).
- Manipulated (man-altered).

**Tributary properties with respect to top of bank (estimate):**
- Average width: ______ feet
- Average depth: ______ feet
- Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):
- Silts
- Sands
- Cobble
- Gravel
- Bedrock
- Vegetation. Type/cover:
- Other. Explain:

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

**Presence of run/riffle/pool complexes.** Explain:

**Tributary geometry:** **Pick List**

**Tributary gradient (approximate average slope):** ______%

(c) Flow:

**Tributary provides for:** **Pick List**

**Estimate average number of flow events in review area/year:** **Pick List**

**Describe flow regime:** T.

**Other information on duration and volume:** ______.

**Surface flow is:** **Pick List.** Characteristics:

**Subsurface flow:** **Pick List.** Explain findings: Likely subsurface flow under streambed but no tests were performed.

**Dye (or other) test performed:** ______.

**Tributary has (check all that apply):**
- Bed and banks
- OHWM\(^6\) (check all indicators that apply):
  - clear, natural line impressed on the bank
  - changes in the character of soil
  - shelving
  - vegetation matted down, bent, or absent
  - leaf litter disturbed or washed away
  - sediment deposition
  - water staining
  - other (list):
- Discontinuous OHWM.\(^7\) Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- High Tide Line indicated by:
- Mean High Water Mark indicated by:

(iii) Chemical Characteristics:

**Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).**

**Explain:** ______.

**Identify specific pollutants, if known:** ______.

\(^6\)A 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.

\(^7\)Ibid.
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): 
- Wetland fringe. Characteristics: 
- Habitat for:
  - Federally Listed species. Explain findings: 
  - Fish/spawn areas. Explain findings: 
  - Other environmentally-sensitive species. Explain findings: 
  - Aquatic/wildlife diversity. Explain findings: 

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: acres
- Wetland type. Explain: 
- Wetland quality. Explain: 
Project wetlands cross or serve as state boundaries. Explain: 

(b) General Flow Relationship with Non-TNW:
Flow is: Pick List. Explain: 
Surface flow is: Pick List
Characteristics: 
Subsurface flow: Pick List. 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 Pick List river miles from TNW.
Project waters are Pick List aerial (straight) miles from TNW.
Flow is from: Pick List.
Estimate approximate location of wetland as within the Pick List 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:
Identify specific pollutants, if known: 

(iii) Biological Characteristics. Wetland supports (check all that apply):
- Riparian buffer. Characteristics (type, average width): 
- Vegetation type/percent cover. Explain: 
- 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: Pick List
Approximately ( ) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

Summarize overall biological, chemical and physical functions being performed: .

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):

1. **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: The creek was dry during surveys in August However there are physical indicators that show that the creek receives flow during the wet season.
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:  .

3. Non-RPWs that flow directly or indirectly into TNWs.
- 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 width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters:  .

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

Provide acreage estimates for jurisdictional wetlands in the review area: 0.03 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 jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

7. Impoundments of jurisdictional waters.
- As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
  - 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).

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):  
- 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:  .

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8 See Footnote # 3.
9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
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.
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.

Provide acreage estimates for jurisdictional waters in the review area (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.

Provide acreage estimates for 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: 0.03 acres.

SECTION IV: DATA SOURCES.

A. 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:
- USDA Natural Resources Conservation Service Soil Survey. Citation:
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Microsoft Bing Maps, NAIP 2010.
- or Other (Name & Date): Site visit photographs March 2012.
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

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:
The waters did not have an apparent connection to a traditional navigable water. The water collected in the roadside ditch and did not appear to have an outlet to the stormwater system. There was no apparent connection between the wetland and Coyote Creek located on the other side of the Hellyer Avenue interchange.
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole 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): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres.
- 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: 0.03 acres.
B. ADDITIONAL COMMENTS TO SUPPORT JD:  


NJ-WL-2 Rapanos Form
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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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: CA County/parish/borough: Santa Clara City: San Jose
Center coordinates of site (lat/long in degree decimal format): Lat. 37.282563° N, Long. 121.809289° W.
Universal Transverse Mercator:
Name of nearest waterbody: Coyote Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: NA
Name of watershed or Hydrologic Unit Code (HUC): Coyote Creek Watershed
☐ 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: 
☐ Field Determination. Date(s): March 7, 8, 9, 15 and 16, 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 the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.
There are no “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 acres.
      Wetlands: acres.

   c. Limits (boundaries) of jurisdiction based on: Pick List
      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: See section III.F for explanation.

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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).
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.; 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 waterbody 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: Pick List
      Drainage area: Pick List
      Average annual rainfall: inches
      Average annual snowfall: inches

   (ii) Physical Characteristics:
      (a) Relationship with TNW:
         ☐ Tributary flows directly into TNW.
         ☐ Tributary flows through Pick List tributaries before entering TNW.
         Project waters are Pick List river miles from TNW.
         Project waters are Pick List river miles from RPW.
         Project waters are Pick List aerial (straight) miles from TNW.
         Project waters are Pick List aerial (straight) miles from RPW.
         Project waters cross or serve as state boundaries. Explain: .
         Identify flow route to TNW: .
         Tributary stream order, if known: .

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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.
(b) General Tributary Characteristics (check all that apply):

**Tributary** is:
- Natural
- Artificial (man-made). Explain:
- Manipulated (man-altered). Explain:

**Tributary** properties with respect to top of bank (estimate):
- Average width: feet
- Average depth: feet
- Average side slopes: Pick List.

Primary tributary substrate composition (check all that apply):
- Silts
- Sands
- Cobbles
- Gravel
- Bedrock
- Vegetation. Type/% cover:
- Other. Explain:

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

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: Pick List

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Pick List

Estimate average number of flow events in review area/year: Pick List

Describe flow regime: T.

Other information on duration and volume:

Surface flow is: Pick List. Characteristics:

Subsurface flow: Pick List. Explain findings: Likely subsurface flow under streambed but no tests were performed.

Dye (or other) test performed:

Tributary has (check all that apply):
- Bed and banks
- OHWM\(^6\) (check all indicators that apply):
  - clear, natural line impressed on the bank
  - changes in the character of soil
  - shelving
  - vegetation matted down, bent, or absent
  - leaf litter disturbed or washed away
  - sediment deposition
  - water staining
  - other (list):
- Discontinuous OHWM.\(^7\) Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- High Tide Line indicated by:
- Mean High Water Mark indicated by:
  - oil or scum line along shore objects
  - fine shell or debris deposits (foreshore)
  - physical markings/characteristics
  - other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Describe:

Identify specific pollutants, if known:

---

\(^6\) A 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.

\(^7\) Ibid.
(iv) **Biological Characteristics.** Channel supports (check all that apply):
- [ ] Riparian corridor. Characteristics (type, average width): .
- [ ] Habitat for:
  - [ ] Federally Listed species. Explain findings: .
  - [ ] Fish/spawn areas. Explain findings: .
  - [ ] Other environmentally-sensitive species. Explain findings: .
  - [ ] Aquatic/wildlife diversity. Explain findings: .

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: acres
     - Wetland type. Explain: .
   - Project wetlands cross or serve as state boundaries. Explain: .

(b) **General Flow Relationship with Non-TNW:**
   - Flow is: **Pick List**. Explain: .
     - Surface flow is: **Pick List**
   - Characteristics: .
   - Subsurface flow: **Pick List**. Explain findings: .
     - Dye (or other) test performed: .

(c) **Wetland Adjacency Determination with Non-TNW:**
   - Directly abutting
   - Not directly abutting
     - Discrete wetland hydrologic connection. Explain: .
     - Separated by berm/barrier. Explain: .

(d) **Proximity (Relationship) to TNW**
   - Project wetlands are **Pick List** river miles from TNW.
   - Project waters are **Pick List** aerial (straight) miles from TNW.
   - Flow is from: **Pick List**.
   - Estimate approximate location of wetland as within the **Pick List** 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: .
   - Identify specific pollutants, if known: .

(iii) **Biological Characteristics.** Wetland supports (check all that apply):
   - [ ] Riparian buffer. Characteristics (type, average width): .
   - [ ] Vegetation type/percent cover. Explain: .
   - [ ] 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: **Pick List**
   - Approximately (_____ ) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

Summarize overall biological, chemical and physical functions being performed: .

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):

1. 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: The creek was dry during surveys in August However there are physical indicators that show that the creek receives flow during the wet season.
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: .

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

- 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 width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters: .

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

- 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: .
- Wetlands 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: .

Provide acreage estimates for jurisdictional wetlands in the review area: 0.03 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 jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

- 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.

7. Impoundments of jurisdictional waters.

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- 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).

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: .

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8See Footnote # 3.
9To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
10Prior 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.
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.
- 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: The waters did not have an apparent connection to a traditional navigable water. The water collected in the roadside ditch and did not appear to have an outlet to the stormwater system. There was no apparent connection between the wetland and Coyote Creek located on the other side of the Hellyer Avenue interchange.
- Other: (explain, if not covered above): 

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole 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): linear feet width (ft).
- 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: 0.02 acres.

SECTION IV: DATA SOURCES.
A. 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: 
- USDA Natural Resources Conservation Service Soil Survey. Citation: 
- National wetlands inventory map(s). Cite name: 
- State/Local wetland inventory map(s): 
- FEMA/FIRM maps: 
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Microsoft Bing Maps, NAIP 2010.
- Other (Name & Date): Site visit photographs March 2012.
- Previous determination(s). File no. and date of response letter: 
- Applicable/supporting case law: 
- Applicable/supporting scientific literature: 
- Other information (please specify): 

Other factors. Explain: 

Identify water body and summarize rationale supporting determination: 

B. ADDITIONAL COMMENTS TO SUPPORT JD: .
NJ-WL-3 Rapanos Form
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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):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
   State: CA   County/parish/borough: Santa Clara   City: San Jose
   Center coordinates of site (lat/long in degree decimal format): Lat. 37.339327° N, Long. 121.850502° W
   Universal Transverse Mercator:
   Name of nearest waterbody: Coyote Creek
   Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: NA
   Name of watershed or Hydrologic Unit Code (HUC): Coyote Creek Watershed
   [ ] Check if map/diagram of review area and/or potential jurisdicitional 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:
   ( ) Field Determination. Date(s): March 7, 8, 9, 15 and 16, 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 the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.
   [ ] There are no “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):  
         [ ] TNWs, including territorial seas
         [ ] Wetlands adjacent to TNWs
         [ ] Relatively permanent waters (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 ___ acres.
         Wetlands: ___ acres.

      c. Limits (boundaries) of jurisdiction based on: Pick List
         Elevation of established OHWM (if known): ___

   2. Non-regulated waters/wetlands (check if applicable):  
      [ ] Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: See section III.F for explanation

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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).
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 waterbody\(^4\) 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: Pick List
   Drainage area: Pick List
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   [ ] Tributary flows directly into TNW.
   [ ] Tributary flows through Pick List tributaries before entering TNW.

   Project waters are Pick List river miles from TNW.
   Project waters are Pick List river miles from RPW.
   Project waters are Pick List aerial (straight) miles from TNW.
   Project waters are Pick List aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .
   Identify flow route to TNW\(^5\): .
   Tributary stream order, if known: .

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\(^4\) 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.
(b) General Tributary Characteristics (check all that apply):

Tributary is:  
☐ Natural  

Tributary properties with respect to top of bank (estimate):

Average width: feet  
Average depth: feet  
Average side slopes: Pick List.

Primary tributary substrate composition (check all that apply):

☐ Silts  ☐ Sands  ☐ Concrete  
☐ Cobbles  ☐ Gravel  ☐ Muck  
☐ Bedrock  ☐ Vegetation. Type/% cover:  
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .  
Tributary geometry: Pick List  
Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Pick List  
Estimate average number of flow events in review area/year: Pick List  
Describe flow regime: T.  
Other information on duration and volume: .  
Subsurface flow: Pick List. Explain findings: Likely subsurface flow under streambed but no tests were performed.  
Dye (or other) test performed: .

Tributary has (check all that apply):

☐ Bed and banks  
☐ OHWM\(^6\) (check all indicators that apply):

☐ clear, natural line impressed on the bank  
☐ the presence of litter and debris  
☐ changes in the character of soil  
☐ destruction of terrestrial vegetation  
☐ shelving  
☐ the presence of wrack line  
☐ vegetation matted down, bent, or absent  
☐ sediment sorting  
☐ leaf litter disturbed or washed away  
☐ scour  
☐ sediment deposition  
☐ multiple observed or predicted flow events  
☐ water staining  
☐ abrupt change in plant community  
☐ other (list):  

☐ Discontinuous OHWM.\(^7\) Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:  
☐ Mean High Water Mark indicated by:  
☐ oil or scum line along shore objects  
☐ survey to available datum;  
☐ fine shell or debris deposits (foreshore)  
☐ physical markings;  
☐ physical markings/characteristics  
☐ vegetation lines/changes in vegetation types.  
☐ tidal gauges  
☐ other (list):  

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).  
Explain: .  
Identify specific pollutants, if known: .

\(^6\) A 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.  
\(^7\) Ibid.
(iv) **Biological Characteristics.** Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

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: acres
     - Wetland type. Explain:
     - Wetland quality. Explain:
   - Project wetlands cross or serve as state boundaries. Explain:

(b) **General Flow Relationship with Non-TNW:**
   - Flow is: [Pick List]. Explain:
     - Surface flow is: [Pick List]
       Characteristics:
     - Subsurface flow: [Pick List]. 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 [Pick List] river miles from TNW.
   - Project waters are [Pick List] aerial (straight) miles from TNW.
   - Flow is from: [Pick List].
   - Estimate approximate location of wetland as within the [Pick List] 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:
   - Identify specific pollutants, if known:

(iii) **Biological Characteristics.** Wetland supports (check all that apply):
   - Riparian buffer. Characteristics (type, average width):
   - Vegetation type/percent cover. Explain:
   - 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: [Pick List]
   - Approximately ( ) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

Summarize overall biological, chemical and physical functions being performed:

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):

1. 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: The creek was dry during surveys in August However there are physical indicators that show that the creek receives flow during the wet season.
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: .

3. Non-RPWs\textsuperscript{3} that flow directly or indirectly into TNWs.
☐ 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 width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

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

Provide acreage estimates for jurisdictional wetlands in the review area: 0.03 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 jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

7. Impoundments of jurisdictional waters.\textsuperscript{9}
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ 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).

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):\textsuperscript{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: .

\textsuperscript{3}See Footnote # 3.
\textsuperscript{9} To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
\textsuperscript{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.
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: The waters did not have an apparent connection to a traditional navigable water. The water collected in the roadside ditch and connected to the stormwater system. The nearest RPW would be Coyote Creek over a mile away.
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole 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): linear feet width (ft).
- 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: 0.01 acres.

SECTION IV: DATA SOURCES.

A. 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 concur with data sheets/delineation report.
- Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps.
- Corps navigable waters’ study.
- USGS NHD data.
- USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name.
- USDA Natural Resources Conservation Service Soil Survey. Citation.
- National wetlands inventory map(s). Cite name.
- State/Local wetland inventory map(s).
- FEMA/FIRM maps.
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: ☒ Aerial (Name & Date): Microsoft Bing Maps, NAIP 2010.
  or ☒ Other (Name & Date): Site visit photographs March 2012.
- Previous determination(s). File no. and date of response letter.
- Applicable/supporting case law.
- Applicable/supporting scientific literature.
- Other information (please specify):
B. ADDITIONAL COMMENTS TO SUPPORT JD:  

NJ-WL-4 and NJ-WL-5 Rapanos Form
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SECTION I: BACKGROUND INFORMATION

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

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

   State: CA  County/parish/borough: Santa Clara  City: Mountain View, Cupertino, Saratoga, Los Gatos and San Jose
   Center coordinates of site (lat/long in degree decimal format): Lat. 37.362890° N, Long. 121.892385° W.
   Universal Transverse Mercator:
   Name of nearest waterbody: Coyote Creek
   Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: NA
   Name of watershed or Hydrologic Unit Code (HUC): Coyote Creek Watershed
   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:
   Field Determination. Date(s): March 7, 8, 9, 15 and 16, 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 the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

   There are no “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 acres.
         Wetlands: acres.

      c. Limits (boundaries) of jurisdiction based on: Pick List
         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: See section III.F for explanation.

---

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).
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 waterbody\(^4\) 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: \(\text{Pick List}\)
Drainage area: \(\text{Pick List}\)
Average annual rainfall: \(\text{inches}\)
Average annual snowfall: \(\text{inches}\)

(ii) Physical Characteristics:
(a) Relationship with TNW:

\(\square\) Tributary flows directly into TNW.
\(\square\) Tributary flows through \(\text{Pick List}\) tributaries before entering TNW.

Project waters are \(\text{Pick List}\) river miles from TNW.
Project waters are \(\text{Pick List}\) river miles from RPW.
Project waters are \(\text{Pick List}\) aerial (straight) miles from TNW.
Project waters are \(\text{Pick List}\) aerial (straight) miles from RPW.
Project waters cross or serve as state boundaries. Explain: .
Identify flow route to TNW\(^5\): .
Tributary stream order, if known: .

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\(^4\) 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.
(b) General Tributary Characteristics (check all that apply):

**Tributary is:**
- Natural
- Artificial (man-made).
- Manipulated (man-altered).

**Tributary properties with respect to top of bank (estimate):**
- Average width:   feet
- Average depth:   feet
- Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):
- Silts
- Sands
- Cobble
- Vegetation. Type/% cover:...
- Concrete
- Muck
- Bedrock
- Gravel
- Other. Explain:  

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:  
Presence of run/riffle/pool complexes. Explain:  
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope):   %

(c) Flow:

**Tributary provides for:** **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: T.
Other information on duration and volume:  
Surface flow is: **Pick List.** Characteristics:  
Subsurface flow: **Pick List.** Explain findings: Likely subsurface flow under streambed but no tests were performed.
Dye (or other) test performed:  
Tributary has (check all that apply):
- Bed and banks
- OHWM6 (check all indicators that apply):
  - clear, natural line impressed on the bank
  - the presence of litter and debris
  - changes in the character of soil
  - destruction of terrestrial vegetation
  - shelving
  - vegetation matted down, bent, or absent
  - sediment sorting
  - leaf litter disturbed or washed away
  - sediment deposition
  - scour
  - water staining
  - sediment deposition
  - abrupt change in plant community
  - other (list):  
- Discontinuous OHWM.7 Explain:  

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- High Tide Line indicated by:  
  - oil or scum line along shore objects
  - fine shell or debris deposits (foreshore)
  - physical markings/characteristics
  - tidal gauges
  - other (list):  
- Mean High Water Mark indicated by:  
  - survey to available datum;
  - physical markings;
  - vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain:  
Identify specific pollutants, if known:  

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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.
(iv) Biological Characteristics. Channel supports (check all that apply):
- Riparian corridor. Characteristics (type, average width): .
- Habitat for:
  - Federally Listed species. Explain findings: .
  - Fish/spawn areas. Explain findings: .
  - Other environmentally-sensitive species. Explain findings: .
  - Aquatic/wildlife diversity. Explain findings: .

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: acres
    - Wetland type. Explain: .
  - Project wetlands cross or serve as state boundaries. Explain: .
(b) General Flow Relationship with Non-TNW:
  - Flow is: Pick List. Explain: .
    - Surface flow is: Pick List
      - Characteristics: .
  - Subsurface flow: Pick List. Explain findings: .
    - Dye (or other) test performed: .
(c) Wetland Adjacency Determination with Non-TNW:
  - Directly abutting
  - Not directly abutting
    - Discrete wetland hydrologic connection. Explain: .
    - Separated by berm/barrier. Explain: .
(d) Proximity (Relationship) to TNW
  - Project wetlands are Pick List river miles from TNW.
  - Project waters are Pick List aerial (straight) miles from TNW.
  - Flow is from: Pick List.
  - Estimate approximate location of wetland as within the Pick List 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: .
  - Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):
  - Riparian buffer. Characteristics (type, average width): .
  - Vegetation type/percent cover. Explain: .
  - 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: Pick List
   Approximately ( ) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
</table>

Summarize overall biological, chemical and physical functions being performed: .

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):

1. 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: The creek was dry during surveys in August However there are physical indicators that show that the creek receives flow during the wet season.
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: __________.

3. Non-RPWs\(^8\) that flow directly or indirectly into TNWs.

☐ Water body 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 width (ft).
☐ Other non-wetland waters: __________ acres.
Identify type(s) of waters: __________.

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

☐ 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 the tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: __________.
☐ Wetlands 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: __________.

Provide acreage estimates for jurisdictional wetlands in the review area: 0.03 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 jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

☐ 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.

7. Impoundments of jurisdictional waters.\(^9\)

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

☐ 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).

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: __________.

\(^8\)See Footnote # 3.
\(^9\) To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
\(^10\) 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.
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.
- 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: The wetland did not have an apparent connection to a traditional navigable water. Seep water from the hillside provides the hydrology for the wetland. No other apparent surface waters were present.
- Other: (explain, if not covered above):  

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole 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): linear feet width (ft).
- 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: 0.03 acres.

SECTION IV: DATA SOURCES.

A. 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:  
- USDA Natural Resources Conservation Service Soil Survey. Citation:  
- National wetlands inventory map(s). Cite name:  
- State/Local wetland inventory map(s):  
- FEMA/FIRM maps:  
- 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)  
- Photographs:  
- Aerial (Name & Date): Microsoft Bing Maps, NAIP 2010. or  
- Other (Name & Date):Site visit photographs March 2012.
- Previous determination(s). File no. and date of response letter:  
- Applicable/supporting case law:  
- Applicable/supporting scientific literature:  
- Other information (please specify):  

B. ADDITIONAL COMMENTS TO SUPPORT JD: .
WWUS-1 Rapanos Form
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SECTION I: BACKGROUND INFORMATION
A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: CA   County/parish/borough: Santa Clara   City: Mountain View, Cupertino, Saratoga, Los Gatos and San Jose
Center coordinates of site (lat/long in degree decimal format): Lat. 37.177063° N, Long. 121.678625° W.
Universal Transverse Mercator:
Name of nearest waterbody:
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: San Francisco Bay
Name of watershed or Hydrologic Unit Code (HUC): Palo Alto Watershed
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:
Field Determination. Date(s): March 7,8, 9, 15 and 16, 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]

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 waters^ 2 (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 0.04 acres.
      Wetlands: 0.02 acres.

   c. Limits (boundaries) of jurisdiction based on: Established by OHWM.
      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:  .

---

^ 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).
^ 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: 320 square miles
   Drainage area: 320 square miles
   Average annual rainfall: 15 inches
   Average annual snowfall: 0 inches
   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☑ Tributary flows directly into TNW.
   ☐ Tributary flows through Pick List tributaries before entering TNW.
   Project waters are 30 (or more) river miles from TNW.
   Project waters are Pick List river miles from RPW.
   Project waters are 20-25 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: No.
   Identify flow route to TNW5: Wetland WWUS -1 is adjacent to the ephemeral drainage WUS-2 that is tributary to Coyote Creek. Coyote Creek connects to mud slough and then San Francisco Bay.

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: Ephemeral Drainage to Coyote Creek to Mud slough to San Francisco Bay.

(b) General Tributary Characteristics (check all that apply):

- Tributary is: ☒ Natural
- ☐ Artificial (man-made). Explain: 
- ☐ Manipulated (man-altered). Explain: 

Tributary properties with respect to top of bank (estimate):
- Average width: 44 feet
- Average depth: 5 feet
- Average side slopes: 4:1 (or greater).

Primary tributary substrate composition (check all that apply):
- ☒ Silts
- ☒ Sands
- ☒ Concrete
- ☒ Cobbles
- ☒ Gravel
- ☒ Muck
- ☐ Bedrock
- ☒ Vegetation. Type/cover: Cottonwood riparian forest
- ☐ Other. Explain: 

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


Tributary geometry: Meandering

Tributary gradient (approximate average slope): %

(c) Flow:

- Tributary provides for: Intermittent but not seasonal flow
- Estimate average number of flow events in review area/year: 20 (or greater)
- Describe flow regime: This stream is perennial with the flow being released by Coyote and Anderson Reservoirs upstream.

Other information on duration and volume: .

Surface flow is: Discrete and confined. Characteristics: 

Subsurface flow: Unknown. Explain findings: Likely subsurface flow under streambed but no tests were performed.

- ☐ Dye (or other) test performed: 

Tributary has (check all that apply):
- ☒ Bed and banks
- ☒ OHWM\(^6\) (check all indicators that apply):
  - ☒ clear, natural line impressed on the bank
  - ☒ changes in the character of soil
  - ☒ shelving
  - ☒ vegetation matted down, bent, or absent
  - ☒ leaf litter disturbed or washed away
  - ☒ sediment deposition
  - ☒ water staining
  - ☐ other (list):
- ☐ Discontinuous OHWM.\(^7\) Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- ☐ High Tide Line indicated by: 
- ☐ Mean High Water Mark indicated by:
  - ☐ oil or scum line along shore objects
  - ☐ fine shell or debris deposits (foreshore)
  - ☐ physical markings/characteristics
  - ☐ tidal gauges
  - ☐ other (list):

(iii) Chemical Characteristics:

- Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
  - Explain: No water could not tell.
- Identify specific pollutants, if known: 

---

\(^6\)A 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.

\(^7\)Ibid.
(iv) **Biological Characteristics.** Channel supports (check all that apply):

- [ ] Riparian corridor. Characteristics (type, average width): None.
- [ ] Wetland fringe. Characteristics: 
- [x] Habitat for:
  - [x] Federally Listed species. Explain findings: Habitat for federally listed California Red-legged Frog and Central California Coast steelhead.
  - [ ] Fish/spawn areas. Explain findings: Steelhead habitat and other fish and aquatic species.
  - [ ] Other environmentally-sensitive species. Explain findings: 
  - [ ] Aquatic/wildlife diversity. Explain findings: 

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: 0.0 acres
- Wetland type. Explain: Freshwater emergent wetlands.
- Wetland quality. Explain: 
- Project wetlands cross or serve as state boundaries. Explain: No.

(b) **General Flow Relationship with Non-TNW:**

Flow is: **Perennial flow.** Explain: 

Surface flow is: **Discrete and confined**

Characteristics: Flow in wetlands occurs from overflow and subsurface flow of Los Gatos Creek.

Subsurface flow: [ ] Yes. Explain findings: Subsurface flow in wetland as determined by examination of soil sample pit.
- 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 **15-20** river miles from TNW.

Project waters are **10-15** 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: Water color is clear.

Identify specific pollutants, if known: Same pollutants as creek; mercury.

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

- [ ] Riparian buffer. Characteristics (type, average width): 
- [x] Vegetation type/percent cover. Explain: 30% spearmint; 20% Fremont cottonwood; 10% arroyo willow; 10% Common cattail.
- [ ] Habitat for:
  - [x] Federally Listed species. Explain findings: Habitat for federally listed Central California Coast steelhead.
  - [ ] Fish/spawn areas. Explain findings: 
  - [ ] Other environmentally-sensitive species. Explain findings: 
  - [x] Aquatic/wildlife diversity. Explain findings: Fish, invertebrates, reptiles, mammals, amphibians and birds.

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

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

Approximately (0.40) acres in total are being considered in the cumulative analysis.
For each wetland, specify the following:

<table>
<thead>
<tr>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
<th>Directly abuts? (Y/N)</th>
<th>Size (in acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWUS 6</td>
<td>Y</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>WWUS1</td>
<td>Y</td>
<td>0.03</td>
<td></td>
</tr>
</tbody>
</table>

Summarize overall biological, chemical and physical functions being performed: .

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):

1. 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: The creek was dry during surveys in August However there are physical indicators that show that the creek receives flow during the wet season.
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: .

3. Non-RPWs\(^6\) that flow directly or indirectly into TNWs.
☐ 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 width (ft).
☐ Other non-wetland waters: acres.

Identify type(s) of waters: .

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.
☐ 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: Guadalupe River receives year round flow from upstream reservoirs.
☐ Wetlands 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: .

Provide acreage estimates for jurisdictional wetlands in the review area: 0.03 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 jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

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

7. Impoundments of jurisdictional waters.\(^7\)

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

☐ 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).

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):\(^8\)

☐ 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: .

\(^6\) See Footnote # 3.
\(^7\) To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
\(^8\) 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.
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 sole 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): linear feet width (ft).
- 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.

SECTION IV: DATA SOURCES.

A. 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:
- USGS NHD data.
- USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: .
- USDA Natural Resources Conservation Service Soil Survey. Citation:
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Microsoft Bing Maps, NAIP 2010. or Other (Name & Date):Site visit photographs August 2010.
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .
Arid West Wetland Data Forms
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VTA 101 Express Lanes
City/County: Santa Clara
State: CA
Sampling Date: 3/6/22

Applicant/Owner: VTA

Investigator(s): C. Stowman, Joe Bandel
Section, Township, Range:
Landform/hillslope/terrace, etc.: Terrace
Local relief (convex, concave, none): Slope (%):
Subregion (LRR): LER-C
Lat.: 37º19'16"N
Long.: -121º09'10"W
Datum: North American 1983

Soil Map Unit Name: ACE - Allophanic clay - 15% or more slopes
WV classification:

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑ No No (If no, explain in Remarks.)
Are Vegetation significantly disturbed? Yes ☑ No ☑
Are Vegetation naturally problematic? Yes ☑ No ☑
Are "Normal Circumstances" present? Yes ☑ No ☑
(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 ☑
Hydric Soil Present? Yes ☑ No ☑
Wetland Hydrology Present? Yes ☑ No ☑
is the Sample Area within a Wetland? Yes ☑ No ☑

Remarks:

Vegetation

<table>
<thead>
<tr>
<th>Tree Stratum (Use scientific names.)</th>
<th>Absolut% Cover</th>
<th>Dominant Indicator</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
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<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
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<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Herb Stratum

Typha latifolia 90  Y  OBL
Ephedra nevadensis 5  N  FACW

Column Totals: 95

Prevalence Index = EBA = 1.1

Hydrophytic Vegetation Indicators:

1. Dominance Test is > 50%
2. Prevalence Index is > 1.0
3. Morphological Adaptaions (Provide supporting data in Remarks or on a separate sheet)
4. Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☑ No ☑

Remarks: Dominance of obligate hydrophytes

US Army Corps of Engineers

Arid West – Version 1-1-2006
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>% Color (moist)</th>
<th>% Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1</td>
<td>Silt</td>
<td>10%</td>
<td>80%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 10</td>
<td>Silt</td>
<td>2%</td>
<td>98%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Type:** C = Concentration, D = Depletion, R = Reduced Matrix, L = Location; PL = Pore Lining, RC = Rock Channel, MM = Matrix

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

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Sulfated Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (B1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Striped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F8)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

**Restrictive Layer (If present):**

- Type: ___________
- Depth (inches): ___________

**Hydric Soil Present?** Yes [ ] No [x]

**Remarks:** Strong Redoximorphic indicators, including hydrogen sulfide odor and gleyed matrix nearly to surface

### 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)
- Drain Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

Secondary indicators (2 or more required)

- Salt Crust (B11)
- Eutic Crust (B12)
- Aquatic Vegetation (B13)
- Oxidized Rhizospheres among Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Other (Explain in Remarks)

**Field Observations:**

- Surface Water Present? Yes [x] No [ ]
- Water Table Present? Yes [x] No [ ]
- Saturation Present? Yes [x] No [ ]

**Wetland Hydrology Present?** Yes [x] No [ ]

**Remarks:** intermittent seep feed drainage from Coyote Ridge/Kirby Canyon alcah off seepage
### WETLAND DETERMINATION DATA FORM – Arid West Region

- **Project/Site:** VIA 101 Express Lane  
- **City/County:** Santa Ana  
- **Sampling Date:** 3/9/12  
- **State:** CA  
- **Sampling Point:** 1B

- **Applicant/Owner:** VIA/Caltrans  
- **Section, Township, Range:** 
- **Landform, relief (hillslope, terrace, etc.):** terrace  
- **Local relief (concave, convex, none):** convex  
- **Slope (%):** 3

- **Subregion (LRR):** LRR-C  
- **Lat:** 37°19′58″  
- **Long:** -117°16′48″  
- **Datum:** NAD 83  
- **Soil Map Unit Name:** AE-E - Arroyo Clay - 15 to 30% slopes

**Are climatic / hydrologic conditions on the site typical for this time of year?** Yes ✓ No  
**Are Vegetation, Soil, or Hydrology significantly disturbed?** Yes ✓ No  
**Are Vegetation, Soil, or Hydrology naturally problematic?** No (If needed, explain any answers in Remarks.)

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Wetland Hydrolony Present?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Is the Sampled Area within a Wetland?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**Remarks:**
Point 1B is 9 ft. up bank from point 1A, in ruderbark grassland.

### VEGETATION

| Tree Stratum (Use scientific names.) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet:
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species, That Are OBL, FACW, or FAC: 0 (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: 1 (B)</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species, That Are OBL, FACW, or FAC: 0 (A/B)</td>
</tr>
</tbody>
</table>
| 4.                                  |                  |                   |                  | Prevalence Index Worksheet:
| 5.                                  |                  |                   |                  | Total % Cover of: |
| 6.                                  |                  |                   |                  | OBL species x 1 = |
| 7.                                  |                  |                   |                  | FACW species x 2 = |
| 8.                                  |                  |                   |                  | FAC species x 3 = |
| 9.                                  |                  |                   |                  | FACU species x 4 = |
| 10.                                 |                  |                   |                  | UPL species x 5 = |
| 11.                                 |                  |                   |                  | Column Totals: (A) |
| 12.                                 |                  |                   |                  | Prevalence Index = B/A = |

**Hydrophytic Vegetation Indicators:**

1. Dominance Test is >50% No |
2. Prevalence Index is >3.0 |
3. Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
4. Problematic Hydrophytic Vegetation (Explain)

**Woody/Vine Stratum**

<table>
<thead>
<tr>
<th>Herb Stratum</th>
<th>1. Centunculus solstitialis</th>
<th>80</th>
<th>Y</th>
<th>UPL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Bromus madritensis</td>
<td>20</td>
<td>N</td>
<td>FACU</td>
</tr>
</tbody>
</table>

**Remarks:**

- Dominance of upland herbaceous species

---

**US Army Corps of Engineers**  
Arid West Version 11-1-2006
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Location</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>10 1/2</td>
<td>10.5%</td>
<td>1 1/2</td>
<td>Sandy Redox (S5)</td>
<td>10%</td>
<td>10%</td>
<td>Sandy clay</td>
<td>Root in upper 3 feet</td>
<td>Sandy clay</td>
<td>Clay silt, clay layer</td>
</tr>
<tr>
<td>10-16</td>
<td>10 1/2</td>
<td>10%</td>
<td>1 1/2</td>
<td>Striated Layers (A5) (LRR C)</td>
<td>10%</td>
<td>10%</td>
<td>Loamy Mucky Mineral (F1)</td>
<td></td>
<td>Clay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>10%</td>
<td>1 1/2</td>
<td>1 cm Muck (A9) (LRR D)</td>
<td>10%</td>
<td>10%</td>
<td>Loamy Gleyed Matrix (F2)</td>
<td></td>
<td>Clay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>10%</td>
<td>1 1/2</td>
<td>Depleted Below Dark Surface (A11)</td>
<td>10%</td>
<td>10%</td>
<td>Redox Dark Surface (F6)</td>
<td></td>
<td>Clay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>10%</td>
<td>1 1/2</td>
<td>Thick Dark Surface (A12)</td>
<td>10%</td>
<td>10%</td>
<td>Redox Depressions (F8)</td>
<td></td>
<td>Clay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>10%</td>
<td>1 1/2</td>
<td>Sandy Mucky Mineral (S1)</td>
<td>10%</td>
<td>10%</td>
<td>Vernal Pools (F9)</td>
<td></td>
<td>Clay</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>10%</td>
<td>1 1/2</td>
<td>Sandy Gleyed Matrix (S4)</td>
<td>10%</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, L=Location, P=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)
- 1 cm Muck (A9)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F-18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

**Indicators of hydrophytic vegetation and wetland hydrology must be present.**

**Restrictive Layer (if present):**

- Depth (Inches): 10

**Hydric Soil Present?** Yes No

**Remarks:**

"No redoximorphic indicators in upland bank position."

---

### 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)
- Ditch Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B8)

**Secondary Indicators (2 or more required):**

- 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)

**Field Observations:**

- Surface Water Present? Yes No Depth (inches):
- Water Table Present? Yes No Depth (inches):
- Saturation Present? Yes No Depth (inches) (includes capillary fringe)

**Wetland Hydrology Present?** Yes No

**Remarks:**

"Fails hydrology, 1B is approximately 2 ft vertically above point 1A."

---

US Army Corps of Engineers

Arid West – Version 11-1-2006
## WETLAND DETERMINATION DATA FORM – Arid West Region

### Project/Site:
- VTA 101 Express Lanes

### Applicant/Owner:
- VTA/Cattails

### Investigator(s):
- C. Stewart, T. Dandy

### Landform:
- Terraces, etc.

### Subregion (LRR):
- C

### Soil/Map Unit Name:
- Gat - Gadoran loam, 0 to 2% slope

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

### VEGETATION

<table>
<thead>
<tr>
<th>Tree Stratum (Use scientific names.)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC:</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata:</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC:</td>
</tr>
</tbody>
</table>

### Sapling/Shrub Stratum

<table>
<thead>
<tr>
<th>Total Cover:</th>
</tr>
</thead>
</table>

### Herb Stratum

<table>
<thead>
<tr>
<th>Cuscuta fontinalis</th>
<th>35</th>
<th>Y</th>
<th>OBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stachy albens</td>
<td>25</td>
<td>Y</td>
<td>OBL</td>
</tr>
<tr>
<td>Cerastostegia</td>
<td>15</td>
<td>Y</td>
<td>FACW</td>
</tr>
<tr>
<td>25</td>
<td>Y</td>
<td>FACW</td>
<td></td>
</tr>
</tbody>
</table>

| Total Cover: 100 |

### Woody Vine Stratum

| Total Cover: |

### % Bare Ground in Herb Stratum | % Cover of Biotic Crust | Remarks: Dominate of obligate and facultative wetland hydrophytes

### US Army Corps of Engineers

Arid West – Version 1-1-2006
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color</th>
<th>Matrix %</th>
<th>Redox Features Color</th>
<th>Redox Features %</th>
<th>Type</th>
<th>Loc'</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10YR 3/2</td>
<td>100%</td>
<td>Sandy Redox (S5)</td>
<td></td>
<td></td>
<td></td>
<td>silt</td>
<td>muck</td>
</tr>
<tr>
<td>1-11</td>
<td>10YR 7/4</td>
<td>100%</td>
<td>Loamy Mucky Mineral (F1)</td>
<td></td>
<td></td>
<td></td>
<td>silt/sand</td>
<td>Roots in top 5%</td>
</tr>
<tr>
<td>11-16</td>
<td>Gley 2.5</td>
<td>85%</td>
<td>Depleted Dark Surface (F7)</td>
<td></td>
<td></td>
<td></td>
<td>clay loam</td>
<td></td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, L=Location, PL=Parent Line, RC=Root Channel, M=Matrix

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

- Histosol (A1)
- Histie Epipedon (A2)
- Black Histie (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)

**Indicators for Problematic Hydric Soils:**

- 1 cm Muck (A5) (LRR C)
- 2 cm Muck (A10) (LRR D)
- Reduced Vertic (F10)
- Red Parent Material (F12)
- Other (Explain in Remarks)

**Restrictive Layer (If present):**

- **Type:**
- **Depth (inches):**
- **Hydric Soil Present?** Yes / No

**Remarks:**

Strong redoximorphic indicators including hydrogen sulfide, reduced matrix and gleyed layer

### HYDROLOGY

**Wetland Hydrology Indicators:**

- **Primary Indicators (Any one indicator is sufficient):**
  - Surface Water (A1)
  - High Water Table (A2)
  - Saturated (A3)
  - Water Marks (B1) (Nonriverine)
  - Sediment Deposits (B2) (Nonriverine)
  - Piezometric Surface (B3) (Nonriverine)
  - Surface Soil Cracks (B6)
  - Inundation Visible on Aerial Imagery (B7)
  - Water-Stained Leaves (B9)

- **Secondary Indicators (2 or more required):**
  - 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 Flowed Soils (C6)
  - Other (Explain in Remarks)
  - FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes / No
- Water Table Present? Yes / No
- Saturation Present? Yes / No

**Depth (inches):**

**Wetland Hydrology Present?** Yes / No

**Remarks:**

Wetland on low terrace east of 107 road bank in valley filled by seepage from hills through culvert under school canopy.

US Army Corps of Engineers

And West – Version 11-1-2006
# WETLAND DETERMINATION DATA FORM – Arid West Region

**Project/Site:** VTA 101 Express Lanes  
**City/County:** Santa Clara  
**Sampling Date:** 3/8/12

**Investigator(s):** [Name]  
**Section, Township, Range:** [Details]  
**Landform (hillslope, terrace, etc.):** [Details]  
**Local relief (concave, convex, none):** [Details]  
**Slope (%):** [Details]  
**Subregion (LRR):** [Details]  
**Lat:** [Details]  
**Long:** [Details]  
**Datum:** [Details]

**Soil Map Unit Name:** GoA - Gareton loam  
**NWI classification:** [Details]

**Are climatic / hydrologic conditions on the site typical for this time of year?** Yes [ ] No [ ]  
(If no, explain in Remarks.)

**Are Vegetation Soil, or Hydrology significantly disturbed?** No [ ]  
(If needed, explain any answers in Remarks.)

**Are Vegetation Soil, or Hydrology naturally problematic?** No [ ]  
(If needed, explain any answers in Remarks.)

---

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>No [ ]</td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>No [ ]</td>
</tr>
</tbody>
</table>

**Remarks:**

Foot of Mt. Hamilton Range / Coyote Ridge just east of 101 freeway  
Edge of transitional marsh and pool

---

### VEGETATION

**Tree Stratum** (Use scientific names.)

<table>
<thead>
<tr>
<th>Tree</th>
<th>Absolute Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover: [ ]

**Sapling/Shrub Stratum**

<table>
<thead>
<tr>
<th>Tree</th>
<th>Absolute Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover: [ ]

**Herb Stratum**

<table>
<thead>
<tr>
<th>Tree</th>
<th>Absolute Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>N</td>
<td>UPL</td>
</tr>
<tr>
<td>2</td>
<td>60</td>
<td>V</td>
<td>FACW</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>D</td>
<td>FAC</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>C</td>
<td>UPL</td>
</tr>
</tbody>
</table>

Total Cover: [ ]

**Woody Vine Stratum**

<table>
<thead>
<tr>
<th>Tree</th>
<th>Absolute Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Cover: [ ]

**% Bare Ground In Herb Stratum:** [ ]  
**% Cover of Biotic Crust:** [ ]

**Remarks:**

Dominance of facultative upland and upland herbaceous species

---

**Dominance Test worksheet:**

<table>
<thead>
<tr>
<th>Number of Dominant Species That Are OBL, FACW, or FAC</th>
<th>0 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Dominant Species Across All Strata</td>
<td>2 (B)</td>
</tr>
<tr>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC</td>
<td>0 (A/B)</td>
</tr>
</tbody>
</table>

**Prevalence Index worksheet:**

<table>
<thead>
<tr>
<th>OBL species</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACW species</td>
<td>2</td>
</tr>
<tr>
<td>FAC species</td>
<td>3</td>
</tr>
<tr>
<td>FACU species</td>
<td>4</td>
</tr>
<tr>
<td>UPL species</td>
<td>5</td>
</tr>
</tbody>
</table>

Column Totals: (A) (B)

**Prevalence Index = B/A =**

**Hydrophytic Vegetation Indicators:**

- Dominance Test is >50% Fails
- Prevalence index is ≤3.0
- Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation (Explain)

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

**Hydrophytic Vegetation Present?** Yes [ ] No [ ]
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16</td>
<td>10YR/4</td>
<td>100</td>
<td>Sandy loam</td>
<td>40% rocks/loose fragments</td>
</tr>
</tbody>
</table>

Type: C=Concentration, D=Depletion, R=Reduced Matrix. 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 Hist (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 Matrix (B1)
- Sandy Gleyed Matrix (B4)
- Sandy Redox (B5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (T12)
- Other (Explain in Remarks)

Hydric Soil Present? Yes [x] No [ ]

Restrictive Layer (if present):

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches):</th>
</tr>
</thead>
</table>

Remarks:

No Redoximorphic indicators in profile

### 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 (C5)

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)
- Ceyfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquifer (D3)
- FAC-Neutral Test (D5)

Field Observations:

- Surface Water Present? Yes [x] No [ ] Depth (inches): [N/A]
- Water Table Present? Yes [x] No [ ] Depth (inches): [ ]
- Saturation Present? Yes [x] No [ ] Depth (inches): [ ]

Wetland Hydrology Present? Yes [x] No [ ]

Remarks:

No hydrology, Point 2B is 10' laterally and ~2 ft. vertically from point 2A (in wetland)
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VTA 101 Express Lanes
City/County: Santa Clara
Sampling Date: 3/6/12
Applicant/Owner: VTA / Caltrans
State: CA
Sampling Point: 3A

Investigator(s): Joe Boudy, Casey Stamm
Section, Township, Range: 
Landform (hillslope, terrace, etc.): Terrace
Local relief (concave, convex): convex
Slope (%): 
Subregion (LRR): 8
Lat: 37.1788280
Long: -121.6797590
Datum: WGS 82
Soil Map Unit Name: SBF 9 San Benito Clay – 30 to 50% Silts NWM classification: 

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☑ (If no, explain in Remarks.)
Are Vegetation ☑ Soil ☐ or Hydrology ☐ significantly disturbed? Yes ☑ No ☑ Are "Normal Circumstances" present? Yes ☑ No ☑ (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 ☑ Is the Sampled Area within a Wetland? Yes ☑ No ☑
Hydric Soil Present? Yes ☑ No ☑
Wetland Hydrology Present? Yes ☑ No ☑

Remarks: Section of canal with section bottom at low point

with standing water

VEGETATION

Tree Stratum (Use scientific names.)
1. 
2. 
3. 
4. 
Total Cover: 

Sapling/Shrub Stratum
1. 
2. 
3. 
4. 
5. 
Total Cover: 

Herb Stratum
1. Typha latifolia 60 Y OBL
2. Mimulus guttatus 40 Y FACW
3. 
4. 
5. 
6. 
7. 
8. 
Total Cover: 

Woody/Vine Stratum
1. 
2. 
Total Cover: 100

% Bare Ground in Herb Stratum 100 

% 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 60 x 1 = 60
FACW species 40 x 2 = 80
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals: 140 (A) 140 (B)
Prevalence Index = B/A = 1

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
✓ Prevalence Index is ≥3.0
 Morphological Adaptors (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☑ No ☑
### Soil Profile Description

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>10YR 74</td>
<td>Sandy Redox (55)</td>
</tr>
<tr>
<td>4-16</td>
<td>10YR 8/8</td>
<td>Loamy Mucky Matrix (F2)</td>
</tr>
</tbody>
</table>

**Type:** C=Concentration, D=Depletion, RM=Reduced Matrix. **Location:** PL=Pore Linings, RC=Root Channel, M=Matrix.

<table>
<thead>
<tr>
<th>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</th>
<th>Indicators for Problematic Hydric Soils:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Histosol (A1)</td>
<td>1 cm Muck (A9) (LRR C)</td>
</tr>
<tr>
<td>Histic Epipedon (A2)</td>
<td>2 cm Muck (A10) (LRR B)</td>
</tr>
<tr>
<td>Black Histic (A3)</td>
<td>Reduced Vertic (F16)</td>
</tr>
<tr>
<td>Hydrogen Sulfide (A4)</td>
<td>Red Parent Material (TF2)</td>
</tr>
<tr>
<td>Stratified Layers (A5) (LRR C)</td>
<td>Other (Explain in Remarks)</td>
</tr>
<tr>
<td>1 cm Muck (A9) (LRR D)</td>
<td></td>
</tr>
<tr>
<td>Depleted Below Dark Surface (A11)</td>
<td></td>
</tr>
<tr>
<td>Sandy Mucky Mineral (S1)</td>
<td></td>
</tr>
<tr>
<td>Sandy Gleyed Matrix (S4)</td>
<td></td>
</tr>
</tbody>
</table>

**Restrictive Layer (if present):**

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches)</th>
<th>Hydric Soil Present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:** Reduced Matrix in submersed soils; dark, thick surface layer.

### Hydrology

**Wetland Hydrology Indicators:**

<table>
<thead>
<tr>
<th>Primary Indicators (any one indicator is sufficient)</th>
<th>Secondary Indicators (2 or more required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Surface Water (A1)</td>
<td>Water Marks (B1) (Riverline)</td>
</tr>
<tr>
<td>High Water Table (A2)</td>
<td>Sediment Deposits (B2) (Riverine)</td>
</tr>
<tr>
<td>Saturation (A3)</td>
<td>Drift Deposits (B3) (Riverine)</td>
</tr>
<tr>
<td>Water Marks (B1) (Nonriverine)</td>
<td>Drainage Patterns (B10)</td>
</tr>
<tr>
<td>Sediment Deposits (B2) (Nonriverine)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>Drift Deposits (B3) (Nonriverine)</td>
<td>Thin Muck Surface (C7)</td>
</tr>
<tr>
<td>Surface Soil Cracks (B6)</td>
<td>Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>Inundation Visible on Aerial Imagery (B7)</td>
<td>Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>Water-Stained Leaves (B9)</td>
<td>Shallow Aquilard (D3)</td>
</tr>
<tr>
<td></td>
<td>FAC-Neutral Test (D5)</td>
</tr>
</tbody>
</table>

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface Water Present?</th>
<th>Yes</th>
<th>No</th>
<th>Depth (inches):</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Table Present?</td>
<td>Yes</td>
<td>No</td>
<td>Depth (inches):</td>
<td></td>
</tr>
<tr>
<td>Saturation Present?</td>
<td>Yes</td>
<td>No</td>
<td>Depth (inches):</td>
<td></td>
</tr>
</tbody>
</table>

**Wetland Hydrology Present?** Yes ✅ No ✗

**Remarks:** Standing water in lower part of canal near entrance to culvert; wetland vegetation extends into concrete from earth canal.

US Army Corps of Engineers

Arid West – Version 11-1-2006
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VTA 101 Express Lanes  
City/County: Santa Clara  
Sampling Date: 3/8/12

Investigator(s): Joe Read, Carole Stewart  
Section, Township, Range:

Landform (hillslope, terrace, etc.):  
Local relief (concave, convex):  
Slope (%): 15

Subregion (LR#: G  
Lat: 37°17′56″  
Long: -112°40′05″  
Datum: WGS84

Soil Map Unit Name: Soils  
San Benito Clay - 30 to 50% slopes  
NR classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  
(If no, explain in Remarks.)

Are Vegetation, Soil, or Hydrology significantly disturbed? No  
Are "Normal Circumstances" present? Yes  No

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes  No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes  No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes  No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes  No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Upland edge of canal on slope of bank just above point 3A.  
Canal is avg. 8' width abov

VEGETATION

<table>
<thead>
<tr>
<th>Tree Stratum (Use scientific names.)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Sapling/Shrub Stratum              |                 |                             |        |                           |
| 1. Acacia                         |                 |                             |        |                           |
| 2.                                 |                 |                             |        |                           |
| 3.                                 |                 |                             |        |                           |
| 4.                                 |                 |                             |        |                           |
| 5.                                 |                 |                             |        |                           |
| Total Cover:                       |                 |                             |        |                           |

| Herb Stratum                      |                 |                             |        |                           |
| 1. Dipsacus fullonum              | 20   | Y   | NI  | 0                          |
| 2. Acacia                         | 55   | Y   | UPL | 2                          |
| 3. Baccharis foliosa              | 10   | N   | UPL | 0                          |
| 4. Baccharisfolios                | 5    | N   | UPL | 0                          |
| 5.                                 |                 |                             |        |                           |
| 6.                                 |                 |                             |        |                           |
| 7.                                 |                 |                             |        |                           |
| 8.                                 |                 |                             |        |                           |
| Total Cover:                       | 90   |     |     |                           |

| Woody/Vine Stratum                |                 |                             |        |                           |
| 1.                                 |                 |                             |        |                           |
| 2.                                 |                 |                             |        |                           |
| Total Cover:                       |                 |                             |        |                           |

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

Remarks: Dominance of upland shrubs and herbs

Hydrophytic Vegetation Indicators:
  - Dominance Test is >50%  No
  - Prevalence index is ≤3.0  No
  - Morphological Adaptations? (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation? (Explain)

Hydrophytic Vegetation Present? Yes  No

US Army Corps of Engineers  
Arid West – Version 11-1-2008
### Soil

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (metal)</th>
<th>%</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-16</td>
<td>10/18</td>
<td>100%</td>
<td></td>
<td>Silty clay loam</td>
<td>Roots in upper 3 inches</td>
</tr>
</tbody>
</table>

**Type:** C=Concentration, D=Depletion, R=Reduced Matrix

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

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Histosol (A1)</td>
<td>Sandy Redox (S5)</td>
</tr>
<tr>
<td>Histosol A2</td>
<td>Stripped Matrix (S6)</td>
</tr>
<tr>
<td>Black Histic A3</td>
<td>Loamy Mucky Mineral (F1)</td>
</tr>
<tr>
<td>Hydrogen Sulfide A4</td>
<td>Loamy Gleyed Matrix (F2)</td>
</tr>
<tr>
<td>Stratified Layers A5 (LRR C)</td>
<td>Depleted Matrix (F3)</td>
</tr>
<tr>
<td>1 cm Muck A9 (LRR D)</td>
<td>Redox Dark Surface (F8)</td>
</tr>
<tr>
<td>Depleted Below Dark Surface A11</td>
<td>Depleted Dark Surface (F7)</td>
</tr>
<tr>
<td>Thick Dark Surface A12</td>
<td>Redox Depressions (F6)</td>
</tr>
<tr>
<td>Sandy Mucky Matrix B1</td>
<td>Vernal Pools (F9)</td>
</tr>
<tr>
<td>Sandy Gleyed Matrix S4</td>
<td></td>
</tr>
</tbody>
</table>

**Indicators for Problematic Hydric Soils:**

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

**Hydric Soils Present?** Yes [ ] No [X]

**Restrictive Layer (if present):**

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches)</th>
</tr>
</thead>
</table>

**Remarks:**

No Redoximorphic Indicators

### Hydrology

**Wetland Hydrology Indicators:**

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- 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 Powed Soils (C6)
- Other (Explain in Remarks)
- Water-Stained Leaves (B9)

**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)
- Cayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquilard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**

<table>
<thead>
<tr>
<th>Surface Water Present?</th>
<th>Yes [X] No [ ] Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Table Present?</td>
<td>Yes [X] No [ ] Depth (inches):</td>
</tr>
<tr>
<td>Saturation Present?</td>
<td>Yes [X] No [ ] Depth (inches):</td>
</tr>
</tbody>
</table>

**Wetland Hydrology Present?** Yes [ ] No [X]

**Remarks:**

Point 3B is on bank slope of canal, approximately five feet laterally and 2.5 ft. vertically from point 3A
**SUMMARY OF FINDINGS**

Attach site map showing sampling point locations, transects, important features, etc.

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VEGETATION**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hydrophytic Vegetation Indicators:**

- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation (Explain)

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

<table>
<thead>
<tr>
<th>Woody/Vine Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

**Remarks:**

Dominated by hydrophytes. Wetland vegetation is present.
### SOIL

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Color (Moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (Moist)</th>
<th>%</th>
<th>Type</th>
<th>Location</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1</td>
<td></td>
<td>10 YR 3/1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 6 inches</td>
<td></td>
<td>10 YR 5/1</td>
<td></td>
<td></td>
<td>10 YR 5/1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Type: C=Concentration, D=Depletion, R=R=Reduced Matrix. 2. Location: P=Path Lining, R=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 (A6) (LRR C)
- 1 cm Muck (A8) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

#### Indicators for Problematic Hydric Soils:
- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F16)
- Red Parent Material (F22)
- Other (Explain in remarks)

#### Restrictive Layer (if present):
- Type: Depleted Matrix, Gleyed Soils
- Depth (Inches):_________

#### Remarks:
- Hydric Soil Present? Yes [X] No

### HYDROLOGY

#### Wetland Hydrology Indicators:
- Surface Water (A1)
- High Water Table (A2)
- Saturated (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)

#### 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 (C3)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquillard (D3)
- FAC-Neutral Test (D5)

#### Field Observations:
- Surface Water Present? Yes [X] No
- Water Table Present? Yes [X] No
- Saturation Present? Yes [X] No

- Depth (Inches): 1"

#### Wetland Hydrology Present? Yes [X] No

#### Remarks:
- Surface water is present at about 1" deep.
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VIA Imperial Express Lanes  
Applicant/Owner: VIA/California  
Investigator(s): Casey Stewart, Joe Randle  
Landform (hillslope, terrace, etc.): Terraced  
Subregion (LRR): C  
Soil Map Unit Name: YC - Yolo Sandy Clay loam - 2  

City/County:  
State:  
Sampling Point:  
Section, Township, Range:  
Local relief (concave, convex, none):  
Slope (%):  
Lat: 37°17'07"  
Long: -114°12'07"  
Datum:  

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  
Are Vegetation ________ Soil ________ or Hydrology ________ significantly disturbed? No  
Vegetation ________ Soil ________ or Hydrology ________ naturally problematic? No  
Are "Normal Circumstances" present? Yes  
Vegetation ________ Soil ________ or Hydrology ________ significantly disturbed? No  
Vegetation ________ Soil ________ or Hydrology ________ naturally problematic? No  

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

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

Remarks: At sample site 4 ft. laterally + 1.5 ft. vertically from point 9A.

VEGETATION

Tree Stratum (Use scientific names.)  
1.  
2.  
3.  
4.  

Absolute % Cover  

Dominant Species?  

Indicator Status  

Dominance Test worksheet:  
Number of Dominant Species That Are OBL, FACW, or FAC: 0  
Total Number of Dominant Species Across All Strata: 2  
Percent of Dominant Species That Are OBL, FACW, or FAC: 0%  

Prevalence Index worksheet:  
Total % Cover of:  

OBL species 0 x 1 = 0  
FACW species 0 x 2 = 0  
FAC species 0 x 3 = 0  
FACU species 0 x 4 = 0  
UPL species 0 x 5 = 0  
Column Totals: 0  
Prevalence Index = A/B = 5  

Hydrophytic Vegetation Indicators:  
____ Dominate Test is >50%  
____ Prevalence Index is >3.0  
____ Morphological Adaptations (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  

% Bare Ground in Herb Stratum 0  
% Cover of Biotic Crust 0

Remarks: No wetland plants present, No: hydrophytes
## SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>10</td>
<td>100%</td>
<td></td>
<td>Sandy Redox (S5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Clay loam</td>
<td>5% sand</td>
</tr>
</tbody>
</table>

1. Type: C=Concentration, D=Deposition, RM=Reduced Matrix
2. Location: PL=Pore Lining, RC=Red Channel, ML=Matrix

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

- Histisol (A1)
- Histic Epipod (A2)
- Black Histic (A3)
- aluminum Hydrogen Surface (A4)
- Gravelized 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)

### Restrictive Layer (if present):
- Type: 
- Depth (inches): 
- Remarks: No hydric soils present

### Hydric Soil Present?: Yes

### 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)
- Induration Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B8)

#### Secondary Indicators (2 or more required):
- Salt Crust (B11)
- Biological Crust (B12)
- Aquatic Invertebrates (B13)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C5)
- Other (Explain in Remarks)

### Field Observations:
- Surface Water Present? Yes No Depth (inches): 
- Water Table Present? Yes No Depth (inches): 
- Saturation Present? Yes No Depth (inches): 

### Wetland Hydrology Present?: No

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

- Remarks: Dry, upland area with wetlands. No hydrology present
### WETLAND DETERMINATION DATA FORM – Arid West Region

**Project/Site:** VTA 101 Express Lanes  
**Applicant/Owner:** VTA/Santa Clara  
**Investigator(s):**  
**City/County:** Santa Clara  
**State:**  
**Sampling Point:**  
**Sampling Date:** 3/8/12  
**Latitude:** 37°28'26"N  
**Longitude:** -121°8'0"W  
**Landform:** hillslope, terrace, etc.  
**Subregion (LRR):**  
**Soil Map Unit Name:** NAWPS  
**Local relief (concaive, convex, none):** concave  
**Slope (%):**  
**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes [ ] No [ ]  
**Are Vegetation _______ Soil _______ or Hydrology _______ significantly disturbed?** No [ ] Yes [ ]  
**Are Vegetation _______ Soil _______ or Hydrology _______ naturally problematic?** No [ ] Yes [ ]  

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [ ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ] No [ ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes [ ] No [ ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

- Riverbank ditch with hydrophytes along NB 101 Express Lanes.
- At Hellyer Ave.

### VEGETATION

<table>
<thead>
<tr>
<th>Tree Stratum (Use scientific names.)</th>
<th>Absolute % Cover</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Number of Dominant Species That Are OBL, FACW, or FAC: (A)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: (B)</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)</td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td>Prevalence Index worksheet:</td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
<td>Multiply by:</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td>OBL species x 1 =</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
<td></td>
<td>FACW species x 2 =</td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td></td>
<td></td>
<td>FAC species x 3 =</td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
<td>FACU species x 4 =</td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
<td></td>
<td>UPL species x 5 =</td>
</tr>
<tr>
<td>Column Totals:</td>
<td></td>
<td></td>
<td></td>
<td>(A)</td>
</tr>
<tr>
<td>Prevalence Index = B/A =</td>
<td></td>
<td></td>
<td></td>
<td>(B)</td>
</tr>
</tbody>
</table>

### Hydrophytic Vegetation Indicators:

- Dominance Test is >50%  
- Prevalence index is ≤3.0  
- Morphological Adaptations  
- Problematic Hydrophytic Vegetation  

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

**Hydrophytic Vegetation Present?** Yes [ ] No [ ]

**% Bare Ground in Herb Stratum:** 30%  
**% Cover of Biotic Crust:** 16%

**Remarks:** Nutsedge is the only plant in the ditch.
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Sandy Redox (S3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-11</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Stripped Matrix (S6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-16</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Loamy Mucky Mineral (F1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-24</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Loamy Gleyed Matrix (F2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-31</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Depleted Matrix (F3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32-36</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Redox Dark Surface (F6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37-43</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Depleted Dark Surface (F7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44-48</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Redox Depressions (F8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49-55</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Vernal Pools (F9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56-62</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Indicators for Problematic Hydric Soils:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63-67</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>1 cm Muck (A9) (LRR C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>68-72</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>2 cm Muck (A10) (LRR B)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>73-77</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Reduced Vertic (F16)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>78-82</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Red Parent Material (TF2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-87</td>
<td>10YR 3/2</td>
<td>46%</td>
<td>Other (Explain in Remarks)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Restrictive Layer (if present):**

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches)</th>
<th>Hydric Soil Present?</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 inches</td>
<td>Yes</td>
<td>Top 5 inches of silty clay are much darker color than upland part</td>
</tr>
<tr>
<td></td>
<td>6-10 inches</td>
<td>No</td>
<td>6-10 inches are till soil fill</td>
</tr>
</tbody>
</table>

### 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)
  - Induction Visible on Aerial Imagery (B7)
  - Water-Stained Leaves (B9)

- **Secondary Indicators (2 or more required):**
  - Water Marks (B1) (Riverine)
  - Sediment Deposits (B2) (Riverine)
  - Drift Deposits (B3) (Riverine)
  - Drainage Patterns (B16)
  - Dry-Season Water Table (C2)
  - Thin Muck Surface (C7)
  - Crayfish Burrows (C8)
  - Saturation Visible on Aerial Imagery (C9)
  - Shallow Aquillard (D3)
  - FAC-Neutral Test (D5)

**Field Observations:**

- Surface Water Present? Yes No Depth (inches): ________
- Water Table Present? Yes No Depth (inches): ________
- Saturation Present? Yes No Depth (inches): ________

- Wetland Hydrology Present? Yes No

**Remarks:**

Soil is damp

---

US Army Corps of Engineers
**WETLAND DETERMINATION DATA FORM – Arid West Region**

**Project/Site:** VTA 101 Express Lanes  
**City/County:** San Jose  
**State:** CA  
**Investigator(s):**  
**Landform:**  
**Subregion (LRK):**  
**Soil Map Unit Name:**  
**Datum:**  

**Are climatic/hydrologic conditions on the site typical for this time of year?** Yes [ ] No [ ]  
**Are Vegetation, Soil, or Hydrology significantly disturbed?** Yes [ ] No [ ]  
**Are Vegetation, Soil, or Hydrology naturally problematic?** Yes [ ] No [ ]

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes [ ] No [ ]</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes [ ] No [ ]</th>
</tr>
</thead>
</table>

**VEGETATION**

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Avena fatua</td>
<td>80% UPL</td>
</tr>
<tr>
<td>2. Brassicaceae</td>
<td>20% UPL</td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>Total Cover 100%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum</th>
<th>Total Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>% Bare Ground in Herb Stratum</td>
<td>0</td>
</tr>
</tbody>
</table>

**Remarks:** Upland grassland on side of roadside ditch

---

**US Army Corps of Engineers**  
**Arid West – Version 11-1-2006**
SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (moist)</td>
<td>%</td>
<td>Color (moist)</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>Sandy Redox (S5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stripped Matrix (S6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leamy Mucky Mineral (F1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loamy Glyed Matrix (F2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depleted Matrix (F3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Redox Dark Surface (F8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depleted Dark Surface (F7)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Redox Depressions (F6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vernal Pools (F9)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Indicators for Problematic Hydric Soils:

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

Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No hydric soil indicators

Hydrology

Wetland Hydrology Indicators:

<table>
<thead>
<tr>
<th>Primary Indicators (any one indicator is sufficient)</th>
<th>Secondary Indicators (2 or more required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>_ Surface Water (A1)</td>
<td>_ Water Marks (B1) (Riverine)</td>
</tr>
<tr>
<td>_ High Water Table (A2)</td>
<td>_ Sediment Deposits (B2) (Riverine)</td>
</tr>
<tr>
<td>_ Saturation (A3)</td>
<td>_ Drift Deposits (B3) (Riverine)</td>
</tr>
<tr>
<td>_ Water Marks (B1) (Nonriverine)</td>
<td>_ Drainage Patterns (B10)</td>
</tr>
<tr>
<td>_ Sediment Deposits (B2) (Nonriverine)</td>
<td>_ Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>_ Drift Deposits (B3) (Nonriverine)</td>
<td>_ Thill Muck Surface (C7)</td>
</tr>
<tr>
<td>_ Surface Soil Cracks (B6)</td>
<td>_ Crayfish Burrows (C8)</td>
</tr>
<tr>
<td>_ Inundation Visible on Aerial Imagery (B7)</td>
<td>_ Saturation Visible on Aerial Imagery (C9)</td>
</tr>
<tr>
<td>_ Water-Stained Leaves (B9)</td>
<td>_ Shallow Aquilard (D3)</td>
</tr>
</tbody>
</table>

Field Observations:

- Surface Water Present? Yes No ✔ Depth (inches):
- Water Table Present? Yes No ✔ Depth (inches):
- Saturation Present? Yes No ✔ Depth (inches):

Wetland Hydrology Present? Yes No

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

Remarks:

No indicators of hydrology
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VTA 101 Express Lane  City/County: San Jose/Santa Clara  Sampling Date: 3/9/12
Applicant/Owner: VTA / Caltrans  State: CA  Sampling Point: 6A
Investigator(s): Casey Stavney, Joe Bande  Section, Township, Range: 

Landform (hillslope, terrace, etc.): Roadside  Local relief (concave, convex): 

Subregion (LRR): C  Lat: 37.284487  Long: -121.298879  Datum: NAD 1927

Soil Map Unit Name: 302 - Montara Rock Outcrop Complex  Slope (%): 

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? No ☒ Yes ☐ (If yes, explain in Remarks.)
Are Vegetation, Soil, or Hydrology naturally problematic? No ☒ Yes ☐ (If yes, explain in Remarks.)

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ☒ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ☒ No ☐</td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☒ No ☐</td>
</tr>
<tr>
<td>Is the Sampled Area within a Wetland?</td>
<td>Yes ☒ No ☐</td>
</tr>
</tbody>
</table>

Remarks:
Roadside ditch on east side of 101, just north of Hellyer Ave.

with cattail

VEGETATION

<table>
<thead>
<tr>
<th>Tree Stratum</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
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<td>3.</td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum</th>
<th>Total Cover:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
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<td>3.</td>
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<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum</th>
<th>Total Cover:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Typha latifolia</td>
<td>80 Y OBL</td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
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<tr>
<td>4.</td>
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<tr>
<td>5.</td>
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<td>6.</td>
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<tr>
<td>7.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td>80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum</th>
<th>Total Cover:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>% Bare Ground in Herb Stratum</td>
<td>20</td>
</tr>
<tr>
<td>% Cover of Biotic Crust</td>
<td>80</td>
</tr>
</tbody>
</table>

Remarks:
Invasive Roadside ditch fed from pond system upslope with dominance of obligate wetland vegetation.

US Army Corps of Engineers  Arid West – Version 11-1-2006
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>Cal/Al</td>
<td>Sandy Redox (S5)</td>
<td>Sandy Clay</td>
<td>Sandy clay, roots in upper 5&quot;</td>
</tr>
<tr>
<td></td>
<td>Cation</td>
<td>Stripped Matrix (S6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A3</td>
<td>Loamy Mucky Mineral (F1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A4</td>
<td>Loamy Gleyed Matrix (F2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A5</td>
<td>Depleted Matrix (F3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A9</td>
<td>Redox Dark Surface (F8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A11</td>
<td>Depleted Dark Surface (F7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A12</td>
<td>Redox Depressions (F8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S1</td>
<td>Vernal Pools (F9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S4</td>
<td>Sandy Gleyed Matrix</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. **Type:** C=Concentration, D=Depletion, RM=Reduced Matrix.

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

- Hirosol (A1)
- Histric Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulphide (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)

### Indicators for Problematic Hydric Soils:

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Verte (F16)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

2. **Indicators of hydrophytic vegetation and wetland hydrology must be present.**

### Restrictive Layer (if present):

<table>
<thead>
<tr>
<th>Type</th>
<th>Depth (inches):</th>
<th>Hydric Soil Present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

**Remarks:**

- Strong redoximorphic indicators, including gleyed soils to surface in inundated roadside ditch.

### 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)

- **Secondary indicators (2 or more required):**
  - Salt Crust (B11)
  - Aquatic Invertebrates (B13)
  - Hydrogen Sulphide Odor (C1)
  - Oxidized Rhizospheres along Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Powed Soils (C6)
  - Other (Explain in Remarks)
  - Water Marks (B1) (Riverline)
  - Sediment Deposits (B2) (Riverline)
  - Drift Deposits (B3) (Riverline)
  - Drainage Patterns (B10)
  - Dry-Season Water Table (C2)
  - Thin Muck Surface (C7)
  - Crealfish Burrows (C8)
  - Saturation Visible on Aerial Imagery (C9)
  - Shallow Aquitard (D3)
  - FAC-Neutral Test (D5)

### Field Observations:

- **Wetland Hydrology Present?**
  - Yes | No
  - Depth (inches): 6

### Remarks:

- Standing water in roadside ditch near Holly Oak Ave.
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VTA 101 Express Lanes
Applicant/Owner: VTA / Caltrans
City/County: San Jose / Santa Clara
State: CA
Sampling Date: 3/9/12
Sampling Point: 6B

Investigator(s): [Redacted]
Section, Township, Range: [Redacted]
Landform (hillslope, terrace, etc.): S略
Local relief (concave, convex): None
Slope (%): [Redacted]
Subregion (LRR): C
Lat.: 37.2949462°
Long.: -121.8092050°
Datum: [Redacted]
Soil Map Unit Name: 302 - Monterey - Rock Furnish - 30% to 56% slopes
NWI classification: [Redacted]

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☑️ No ☐ (If no, explain in Remarks.)
Are Vegetation Soil ☑️ or Hydrology ☑️ significantly disturbed? Moved [Redacted]
Are “Normal Circumstances” present? Yes ☑️ No ☐

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ☑️ No ☐</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ☑️ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ☑️ No ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☑️ No ☐</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Upland point is 18 inches vertically up roadside slope from Point 6B

VEGETATION

<table>
<thead>
<tr>
<th>Tree Stratum (Use scientific names.)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<td>4.</td>
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<tr>
<td>Total Cover: 0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
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<td>4.</td>
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<tr>
<td>5.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover: 0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Helianthus Forsedilosa</td>
<td>20 Y UPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Eriogonum fasciculatum</td>
<td>20 Y UPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Eriogonum fasciculatum</td>
<td>10 Y UPL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Picris ghindes</td>
<td></td>
<td></td>
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<td>5.</td>
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<td>6.</td>
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<td>7.</td>
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<td>8.</td>
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<tr>
<td>Total Cover: 60</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody/Vine Stratum</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover: 40</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

| % Bare Ground in Herb Stratum       | 40               | % Cover of Biotic Crust     |        |

Remarks: Ruderal upland bank, with upland weed sprouts

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (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:
- Dominance Test is >50% ☑️ No ☐
- Prevalence Index is >3.0 ☑️ No ☐
- Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation* (Explain)

*Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☑️ No ☐
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>Color (moist)</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10</td>
<td>10YR 3/2</td>
<td>9.0</td>
<td>10YR 3/2</td>
<td>NA</td>
<td>clay</td>
<td>10% Rocks + Gravel</td>
</tr>
</tbody>
</table>

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

Hydric Soil Indicators: (Applicable to all LRR's, unless otherwise noted.)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Histosol (A1)</td>
<td>NA</td>
</tr>
<tr>
<td>- Histic Epipedon (A2)</td>
<td>Sandy Redox (S5)</td>
</tr>
<tr>
<td>- Black Histic (A3)</td>
<td>Stripped Matrix (S6)</td>
</tr>
<tr>
<td>- Hydrogen Sulfide (A4)</td>
<td>Loamy Mucky Mineral (F1)</td>
</tr>
<tr>
<td>- Stratified Layers (A5) (LRR C)</td>
<td>Loamy Gleyed Matrix (F2)</td>
</tr>
<tr>
<td>- 1 cm Muck (A9) (LRR D)</td>
<td>Depleted Matrix (F3)</td>
</tr>
<tr>
<td>- Depleted Below Dark Surface (A11)</td>
<td>Redox Dark Surface (F6)</td>
</tr>
<tr>
<td>- Thick Dark Surface (A12)</td>
<td>Redox Depressions (F8)</td>
</tr>
<tr>
<td>- Sandy Mucky Mineral (S1)</td>
<td>Vernal Pools (F9)</td>
</tr>
<tr>
<td>- Sandy Gleyed Matrix (S4)</td>
<td>NA</td>
</tr>
</tbody>
</table>

Restrictive Layer (if present):

Type: 

Depth (inches): 

Remarks: *No Redoximorphic indicators present*

**HYDROLOGY**

Wetland Hydrology Indicators:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Surface Water (A1)</td>
<td>Salt Crust (B11)</td>
</tr>
<tr>
<td>- High Water Table (A2)</td>
<td>Biotic Crust (B12)</td>
</tr>
<tr>
<td>- Saturation (A3)</td>
<td>Aquatic Invertebrates (B13)</td>
</tr>
<tr>
<td>- Water Marks (B1) (Nonriverine)</td>
<td>Hydrogen Sulfide Odor (C1)</td>
</tr>
<tr>
<td>- Sediment Deposits (B2) (Nonriverine)</td>
<td>Oxidized Rhizospheres along Living Roots (C3)</td>
</tr>
<tr>
<td>- Drift Deposits (B3) (Nonriverine)</td>
<td>Presence of Reduced Iron (C4)</td>
</tr>
<tr>
<td>- Surface Soil Cracks (B6)</td>
<td>Recent Iron Reduction in Flowed Soils (C6)</td>
</tr>
<tr>
<td>- Inundation Visible on Aerial Imagery (B7)</td>
<td>Other (Explain in Remarks)</td>
</tr>
<tr>
<td>- Water-Stained Leaves (B9)</td>
<td>NA</td>
</tr>
</tbody>
</table>

Field Observations:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Depth (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water Present?</td>
<td>Yes</td>
</tr>
<tr>
<td>Water Table Present?</td>
<td>Yes</td>
</tr>
<tr>
<td>Saturation Present? (Includes capillary fringe)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Wetland Hydrology Present? | No

**Secondary Indicators (2 or more required)**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Water Marks (B1) (Riverine)</td>
<td>Sediment Deposits (B2) (Riverine)</td>
</tr>
<tr>
<td>- Drainage Patterns (B10)</td>
<td>Dry-Season Water Table (C2)</td>
</tr>
<tr>
<td>- Thin Muck Surface (C7)</td>
<td>Shallow Aquifard (D3)</td>
</tr>
<tr>
<td>- Crayfish Burrows (C8)</td>
<td>FAC-Neutral Test (D5)</td>
</tr>
<tr>
<td>- Saturation Visible on Aerial Imagery (C9)</td>
<td>NA</td>
</tr>
</tbody>
</table>

Remarks:

Fails hydrology

US Army Corps of Engineers

Arid West – Version 11-1-2006
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VTA 101 Express Lanes
City/County: San Jose/Santa Clara
Sampling Date: 3/19/12
Applicant/Owner: VTA/Caltrans
State: CA
Sampling Point: 7A
Investigator(s): Casey Steward, Joe Bandel
Section, Township, Range:
Landform (hillslope, terrace, etc.): TERRACE
Local relief (concave, convex, none): C
Slope (%):
Subregion (LRR): Lat: 37.333333
Long: 121.883333
Datum: NAD 1988
Soil Map Unit Name: 180-Urbanland-Newport Complex
WML classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes V No (If no, explain in Remarks.)
Are Vegetation ______ Soil ______ or Hydrology _____ significantly disturbed? No
Are Vegetation ______ Soil ______ or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes √</th>
<th>No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes √</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes √</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes √</td>
<td>No</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Remarks: Drainage ditch draining to stormwater collector in cove/relief of interchange area on east side of 101 @ 280/60 interchange

VEGETATION

<table>
<thead>
<tr>
<th>Tree Stratum (Use scientific names.)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
<th>Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td>Total Number of Dominant Species Across All Strata: 1 (B)</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td>Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)</td>
</tr>
<tr>
<td>3.</td>
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<td>4.</td>
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<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum</th>
<th>Total Cover:</th>
<th></th>
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<td>1.</td>
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<table>
<thead>
<tr>
<th>Herb Stratum</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sciapsus Robustus</td>
<td>95</td>
<td>Y</td>
<td>OBL</td>
<td></td>
</tr>
<tr>
<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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<td>5.</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody Vine Stratum</th>
<th>Total Cover:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

| % Bare Ground in Herb Stratum       | 5                |       |                  |                                                                                  |

| Remarks:                            | Dominant species in ditch is obligate hydrophyte |

US Army Corps of Engineers
Arid West – Version 11-1-2006
**SOIL**

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>10YR 4/3</td>
<td>70%</td>
<td></td>
<td>10YR 4/3</td>
<td>30%</td>
<td>RM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-16</td>
<td>10YR 4/3</td>
<td>80%</td>
<td></td>
<td>10YR 4/3</td>
<td>50%</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Type: C=Concentration, D=Depletion, RM=Reduced Matrix  
Location: PL=Pore Lining, RC=Root Channel, IM=Imbibed Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)
- Histic Epipedon (A2)
- Black Hist (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)

Restrictive Layer (if present):
- Type:  
- Depth (inches):  
- Remarks:  

Hydric Soil Present? Yes ✓ No

**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 (B8)

- Secondary Indicators (2 or more required)
  - Salt Crust (B11)
  - Biotic Crust (B12)
  - Aquatic Invertebrates (B13)
  - Hydrogen Sulfide Odor (C1)
  - Oxidized Rhizospheres among Living Roots (C3)
  - Presence of Reduced Iron (C4)
  - Recent Iron Reduction in Plowed Soils (C6)
  - Other (Explain in Remarks)

Field Observations:
- Surface Water Present? Yes No ✓ Depth (inches):  
- Water Table Present? Yes No ✓ Depth (inches):  
- Saturation Present? Yes No ✓ Depth (inches):  

Wetland Hydrology Present? Yes ✓ No

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

Remarks:
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VTA 101 Express Lanes  City/County: San Jose/Santa Clara  Sampling Date: 2/9/12
Applicant/Owner: VTA Caltrans  State: CA  Sampling Point: 7B
Investigator(s): Casey Svore  Joe Rondal  Section, Township, Range:
Landform (hillslope, terrace, etc.): Elevation - Drainage: Local relief (concave, convex, none):
Slope (%): 
Subregion (LRR): C  Lat: 37.35858%  Long: -121.853583  Datum:
Soil Map Unit Name: 180-U-Desertland-Newark Complex, 0 to 8% slope  NWI classification:

Are climactic/hydrologic conditions on the site typical for this time of year? Yes ✔ No (if no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? No  Are "Normal Circumstances" present? Yes ✔ No (if needed, explain any answers in Remarks.)
Are Vegetation, Soil, or Hydrology naturally problematic? No

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes ✔ No</th>
<th>Is the Sampled Area within a Wetland?</th>
<th>Yes ✔ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ✔ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ✔ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: This point is approximately 40 ft. horizontally & 2 ft. vertically from point 7A. Taken in slopeleaf 3. I-1096/105/101 interchanges.

VEGETATION

<table>
<thead>
<tr>
<th>Tree Stratum (Use scientific names.)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sapling/Shrub Stratum

| 1.                                  |                 |                           |        |
| 2.                                  |                 |                           |        |
| 3.                                  |                 |                           |        |
| 4.                                  |                 |                           |        |
| 5.                                  |                 |                           |        |
| Total Cover:                    |                 |                           |        |

Herb Stratum:

<table>
<thead>
<tr>
<th>1. <em>Atriplex lobiculata</em></th>
<th>65%</th>
<th>Y</th>
<th>UPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. <em>Centaurea lindheimeri</em></td>
<td>5%</td>
<td>N</td>
<td>UPL</td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Woody Vee Stratum

| 1.                                  |                 |                           |        |
| 2.                                  |                 |                           |        |
| Total Cover:                    |                 |                           |        |

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

Remarks: Only unknown species present

Hydrophytic Vegetation Indicators:
- Dominance Test is >50%
- Prevalence Index is ≤3.0
- Morphological Adaptation
  - Problematic Hydrophytic Vegetation

Hydrophytic Vegetation Present? | Yes ✔ No

US Army Corps of Engineers  Arid West – Version 11-1-2008
### SOIL

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix Color (moist)</th>
<th>%</th>
<th>Redox Features Color (moist)</th>
<th>%</th>
<th>Type</th>
<th>Loc</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>1044R4/2</td>
<td>100%</td>
<td>Sandy Redox (S5)</td>
<td></td>
<td></td>
<td></td>
<td>Clay loam</td>
<td></td>
</tr>
<tr>
<td>7-12</td>
<td>1048.26</td>
<td>100%</td>
<td>Stripped Matrix (S6)</td>
<td></td>
<td></td>
<td></td>
<td>Clay loam</td>
<td></td>
</tr>
</tbody>
</table>

**Type: C=Concentration, D=Deposition, R=Reduced, Matrix: 2=Location: PL=Pipe Lining, RC=Root Channel, MR=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 (A6) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

**Indicators for Problematic Hydric Soils:**
- 1 cm Muck (A6) (LRR C)*
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F16)
- Red Parent Material (TF) 6
- Other (Explain in Remarks)

**Hydric Soil Present?** Yes [ ] No [ √ ]

**Hydrology**

**Primary Indicators (any one indicator is sufficient):**
- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C2)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Flowed Soils (C5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**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)
- Clayish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (C3)
- FAC-Neutral Test (D5)

**Field Observations:**
- Surface Water Present? Yes [ ] No [ √ ] Depth (inches): [ ]
- Water Table Present? Yes [ ] No [ ] Depth (inches): [ ]
- Saturated Present? Yes [ ] No [ ] Depth (inches): [ ]

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

**Remarks:** No signs of indicators of hydrology

---

US Army Corps of Engineers

Arid West – Version 11-1-2006
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VTA I-15 Express Lanes  City/County: San Jose, Santa Clara  Sampling Date: 3/4/12
Applicant/Owner: Caltrans VTA  State: CA  Sampling Point: 8A
Investigator(s): Casey Howson, Joe Bandel  Section, Township, Range:
Landform (hillslope, terrace, etc.): Creek bottom - channel  Local relief (concave, convex, none): Slope (%):
Subregion (LRR): C  Lat: 37.37980  Long: -112.932782  Datum: NAD 83
Soil Map Unit Name: 172 - Elder fine sandy loam - 0 to 2% slope  NHL classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)
Are Vegetation  Soil  or Hydrology  significantly disturbed?  Yes  No  Are Normal Circumstances present? Yes  No  (If needed, explain any answers in Remarks.)

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

<table>
<thead>
<tr>
<th>Hydrophytic Vegetation Present?</th>
<th>Yes  No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>Is the Sampled Area within a Wetland?</td>
<td>Yes  No</td>
</tr>
</tbody>
</table>

Remarks:

on the bank side of wetland.

VEGETATION

<table>
<thead>
<tr>
<th>Tree Stratum (Use scientific names.)</th>
<th>Absolute % Cover</th>
<th>Dominant Indicator Species?</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
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<td>3.</td>
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<td></td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sapling/Shrub Stratum</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
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<td>2.</td>
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<td>3.</td>
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<tr>
<td>4.</td>
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<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herb Stratum</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sedum graminaceum</td>
<td>40%</td>
<td>OBL</td>
</tr>
<tr>
<td>2.</td>
<td>Festuca rubra</td>
<td>40%</td>
<td>OBL</td>
</tr>
<tr>
<td>3.</td>
<td>Helianthus annuus</td>
<td>10%</td>
<td>FACW</td>
</tr>
<tr>
<td>4.</td>
<td>Equisetum helvatum</td>
<td>10%</td>
<td>FACW</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
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<tr>
<td>7.</td>
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<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Woody/Vine Stratum</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cover:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
</table>

Remarks:

Dominance of Obligate Wetland Plants

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC:
Total Number of Dominant Species Across All Strata:
Percent of Dominant Species That Are OBL, FACW, or FAC:
Prevalence index worksheet:
Total % Cover of:
OBL species x 1 =
FACW species x 2 =
FAC species x 3 =
FACU species x 4 =
UPL species x 5 =
Column Totals:
Prevalence Index = B/A =

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

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes  No

US Army Corps of Engineers  Arid West – Version 11-1-2006
SOIL

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

<table>
<thead>
<tr>
<th>Depth (inches)</th>
<th>Matrix</th>
<th>Color (moist)</th>
<th>%</th>
<th>Redox Features</th>
<th>Texture</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>10%YR</td>
<td>S A 120</td>
<td></td>
<td></td>
<td></td>
<td>Sandy Clay 15% sand</td>
</tr>
<tr>
<td>2-7</td>
<td>10%YR</td>
<td>S A 100</td>
<td></td>
<td></td>
<td></td>
<td>Sandy Clay</td>
</tr>
<tr>
<td>7-10</td>
<td>10%YR</td>
<td>S A 80</td>
<td></td>
<td></td>
<td></td>
<td>Sandy Loam 20% sand</td>
</tr>
</tbody>
</table>

Type: C=Concentration, D=Depletion, RM=Reduced Matrix.

Location: PL=Pore Limiting, RC=Root Channel, M=Matrix.

Hydric Soil indicators: (Applicable to all LRRs, unless otherwise noted.)
- Histosol (A1)
- Histotic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

Indicators for Problematic Hydric Soils:
- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (See in Remarks)

Indicators of hydric phytophyletic vegetation and wetland hydrology must be present.

Restrictive Layer (If present):
- Type:
- Depth (inches):

Hydric Soil Present? Yes ✓ No

Remarks: Reduced soil conditions produced dark brown soil colors.

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)
- Oxidizing Water Cracks (B3) (Nonriverine)
- Inundation Visible on Aerial Imagery (B7)
- Water-Soiled 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 Flowing Soils (C6)
- Other (See 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 Depth (inches): 8
- Water Table Present? Yes ✓ No Depth (inches):
- Saturation Present? Yes ✓ No Depth (inches): 3.0

Wetland Hydrology Present? Yes ✓ No

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

Remarks: Surface water present at 8 inches below surface. Hydrogen sulfide odor present.

US Army Corps of Engineers
Arid West - Version 11-1-2008
WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: VTA 101 Express lanes  City/County: San Jose/Santa Clara  Sampling Date: 3/4/12
Applicant/Owner: Caltrans VTA  State: CA  Sampling Point: E4
Investigator(s): Casey Stevens, Joe Randel
Landform (hillslope, terrace, etc.): Channel
Local relief (concave, convex, none): C
Subregion (LRR): Sheet: 87-37-044-02
Soil Map Unit Name: 171 - Edaphic Sandy Loam - 0 to 2% slopes

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐
(If no, explain in Remarks.)

Are vegetation ______ Soil _______, or Hydrology _______ significantly disturbed? Yes ☑ No ☐
(If needed, explain any answers in Remarks.)

Are vegetation ______ Soil _______, or Hydrology _______ naturally problematic? Yes ☑ No ☐
(If needed, explain any answers in Remarks.)

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

<table>
<thead>
<tr>
<th>Feature Present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrophytic Vegetation</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Hydric Soil</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Wetland Hydrology</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Remarks: This point is on concrete. There are no soils or plants present. No signs of hydrology. Tree was no other point that could be taken in on upland which had soil/origin of the wetland. The sides of the channel are concrete.

VEGETATION

<table>
<thead>
<tr>
<th>Stratum</th>
<th>Use scientific names</th>
<th>% Cover</th>
<th>Absolute</th>
<th>Dominant Species</th>
<th>Indicator Status</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Stratum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
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</tr>
<tr>
<td>2.</td>
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<td>3.</td>
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<tr>
<td>4.</td>
<td></td>
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</tr>
<tr>
<td>Sapling/Shrub Stratum</td>
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<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<tr>
<td>Herb Stratum</td>
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<td>Total Cover:</td>
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<td>Woody Vine Stratum</td>
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<tr>
<td>Total Cover:</td>
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<tr>
<td>% Bare Ground in Herb Stratum</td>
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<tr>
<td>% Cover of Biotic Crust</td>
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</tbody>
</table>

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: (A)
Total Number of Dominant Species Across All Strata: (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Prevalence Index Worksheet:
Total % Cover of: OBL species $\times 1 =$
FACW species $\times 2 =$
FAC species $\times 3 =$
FACU species $\times 4 =$
UPL species $\times 5 =$
Column Totals: (A) (B)
Prevalence Index = $B/A =$

Hydrophytic Vegetation Indicators:
1. Dominance Test is ≥50%
2. Prevalence Index is ≥3.0
3. Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
4. Problematic Hydrophytic Vegetation (Explain)

Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☑ No ☐

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**SOIL**

<table>
<thead>
<tr>
<th>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrix</td>
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<td>Depth (Inches)</td>
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<tr>
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<tr>
<td>---</td>
</tr>
</tbody>
</table>

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix.*  
*Location: PL=Pore Line, RC=Root Channel, M=Matrix.*

**Hydric Soil Indicators:** (Applicable to all LRRs, unless otherwise noted.)  
- Histosol (A1)
- Histic Epipodion (A2)
- Black Histie (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 1 cm Muck (A9) (LRR C)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)

**Indicators for Problematic Hydric Soils:**
- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F16)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

**Restrictive Layer (if present):**  
<table>
<thead>
<tr>
<th>Type:</th>
<th>Depth (inches):</th>
<th>Hydric Soil Present?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

**Remarks:**  
No soils present, just concrete + boulder/rip-rap/armor rock

---

**HYDROLOGY**

**Wetland Hydrology Indicators:**
- 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)
- Incursion Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

**Primary Indicators (any one indicator is sufficient):**  
- 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)
- Clay Flats Burrows (C6)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

**Field Observations:**
- Surface Water Present? Yes | No | Depth (inches): |
- Water Table Present? Yes | No | Depth (inches): |
- Saturation Present? Yes | No | Depth (inches): |

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

**Remarks:**  
No signs of hydrology present
Appendix C  Photos of Representative Wetlands and Other Waters of the United States

Photograph 1: CWUS-1 Permanente Creek – culverted water (Appendix A, Sheets 5 and 43)

Photograph 2: WUS-1 Coyote Creek, southernmost crossing under US 101 (Appendix A, Sheets 36, 37 and 69)
Photograph 3: WUS-1 Coyote Creek, southernmost crossing, west of US 101 (Appendix A, Sheets 36, 37 and 69)

Photograph 4: WUS-9 Ephemeral Drainage, on the east side of US 101; continuation of WUS-8 on the west side of US 101, north of Coyote Creek Golf Drive (Appendix A, Sheets 34 and 65)
Appendix C Photos of Representative Wetlands and Other Waters of the United States

Photograph 5: WUS-12 Coyote Creek, crossing under US 101 and ramps to SR 85 (Appendix A, Sheets 29 and 58)

Photograph 6: WUS-12 Coyote Creek, crossing under US 101/SR 85 interchange in San Jose (Appendix A, Sheets 29 and 58)
Photograph 7: WUS-13 Ephemeral drainage to Coyote Creek, on the west side of Coyote Creek just east of the US 101 overcrossing at Bernal Road (Appendix A, Sheets 29 and 58)

Photograph 8: WUS-14 Coyote Creek, crossing under US 101 near the US 101/Hellyer Avenue interchange (Appendix A, Sheets 24 and 57)
Photograph 9: WUS-14 Coyote Creek, crossing under US 101 near the US 101/Hellyer Avenue interchange (Appendix A, Sheets 24 and 57)

Photograph 10: WUS-17 Silver Creek, at US 101 bridge (Appendix A, Sheets 16 and 53)
Photograph 11: WUS-19 Guadalupe River, underneath US 101 (Appendix A, Sheets 13 and 51)

Appendix C Photos of Representative Wetlands and Other Waters of the United States

Photograph 13: WUS-20 San Tomas Aquino Creek, south of US 101 (Appendix A, Sheets 12 and 50)

Photograph 14: WUS-22 Mathilda Channel (Appendix A, Sheets 9 and 47)
Appendix C Photos of Representative Wetlands and Other Waters of the United States

Photograph 15: WUS-26 Intermittent stream, with Mt. Hamilton fountain thistle west of US 101 (Appendix A, Sheets 35 and 67)

Photograph 16: WUS-27 Ephemeral drainage, east of US 101 with Mt. Hamilton fountain thistle (Appendix A, Sheets 34 and 66)
Photograph 17: WUS-27 Ephemeral drainage, east of US 101 with Mt. Hamilton fountain thistle (Appendix A, Sheets 34 and 66)

Photograph 18: WUS-28 Ephemeral Drainage (Appendix A, Sheets 35 and 67)
Appendix C Photos of Representative Wetlands and Other Waters of the United States

Photograph 19: WUS-31 Intermittent stream (Appendix A, Sheets 32 and 62)

Photograph 20: WWUS-3 Cattail wetland – perennial in-stream, located on the east side of the US 101/Coyote Creek Golf Drive interchange (Appendix A, Sheets 34 and 66)
Appendix C Photos of Representative Wetlands and Other Waters of the United States

Photograph 21: WWUS-3 Cattail wetland – perennial in-stream, located on the east side of the US 101/Coyote Creek Golf Drive interchange (Appendix A, Sheets 34 and 66)

Photograph 22: WWUS-4 Cattail wetland – in-stream (Appendix A, Sheets 33 and 63)
Appendix C Photos of Representative Wetlands and Other Waters of the United States

Photograph 23: WWUS-5 Freshwater marsh – perennial (Appendix A, Sheets 33 and 63)

Photograph 24: WWUS-7 Coyote Creek – perennial in-stream located on the east side of US 101 south of the northbound US 101/westbound SR 85 interchange (Appendix A, Sheets 29 and 58)
Appendix C Photos of Representative Wetlands and Other Waters of the United States

Photograph 25: WWUS-12 Perennial freshwater wetland, along west side of US 101 (Appendix A, Sheets 29 and 59)

Photograph 26: WWUS-13 Perennial freshwater cattail wetland, along east side of US 101 (Appendix A, Sheets 29 and 59)
Photograph 27: NJ-WL-4 Seep-fed cattail wetland – isolated, caused by underground seep, located on slope of exit ramp (Appendix A, Sheets 15 and 52)

Photograph 28: NJ-WL-5 Seep-fed cattail wetland – isolated, caused by underground seep, on slope of exit ramp (Appendix A, Sheets 15 and 52)
# Appendix D Vascular Plant List

Vascular Plants of US 101 Express Lanes Project Biological Study Area

<table>
<thead>
<tr>
<th>Family</th>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Life history</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aceraceae</td>
<td><em>Acer macrophyllum</em></td>
<td>big-leaf maple</td>
<td>tree</td>
<td>native</td>
</tr>
<tr>
<td>Adoxaceae</td>
<td><em>Sambucus nigra ssp. caerulea</em></td>
<td>blue elderberry</td>
<td>shrub</td>
<td>native</td>
</tr>
<tr>
<td>Anacardiaceae</td>
<td><em>Schinus molle</em></td>
<td>Peruvian pepper tree</td>
<td>tree</td>
<td>native</td>
</tr>
<tr>
<td>Anacardiaceae</td>
<td><em>Toxicodendron diversilobum</em></td>
<td>Pacific poison oak</td>
<td>shrub</td>
<td>native</td>
</tr>
<tr>
<td>Apiaceae</td>
<td><em>Anthriscus caucalis</em></td>
<td>bur-chevril</td>
<td>annual</td>
<td>non-native</td>
</tr>
<tr>
<td>Apiaceae</td>
<td><em>Conium maculatum</em></td>
<td>poison hemlock</td>
<td>biennial</td>
<td>Cal-IPC Moderate</td>
</tr>
<tr>
<td>Apiaceae</td>
<td><em>Foeniculum vulgare</em></td>
<td>sweet fennel</td>
<td>perennial</td>
<td>Cal-IPC High</td>
</tr>
<tr>
<td>Apiaceae</td>
<td><em>Lomatium utriculatum</em></td>
<td>lomatium</td>
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<td>native</td>
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<tr>
<td>Apiaceae</td>
<td><em>Sanicula bipinnata</em></td>
<td>poison sanicle</td>
<td>annual</td>
<td>native</td>
</tr>
<tr>
<td>Apiaceae</td>
<td><em>Sanicula bipinnatifida</em></td>
<td>purple sanicle</td>
<td>annual</td>
<td>native</td>
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<tr>
<td>Apiaceae</td>
<td><em>Sanicula crassicaulis</em></td>
<td>Pacific sanicle</td>
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<tr>
<td>Apiaceae</td>
<td><em>Torilis arvensis</em></td>
<td>meadow parsley</td>
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<tr>
<td>Apocynaceae</td>
<td><em>Nerium oleander</em></td>
<td>oleander</td>
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<tr>
<td>Apocynaceae</td>
<td><em>Vinca major</em></td>
<td>periwinkle</td>
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<tr>
<td>Araliaceae</td>
<td><em>Hedera helix</em></td>
<td>English ivy</td>
<td>vine</td>
<td>Cal-IPC High</td>
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<tr>
<td>Arecaceae</td>
<td><em>Washingtonia robusta</em></td>
<td>Washington fan palm</td>
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<tr>
<td>Asteraceae</td>
<td><em>Achillea millefolium</em></td>
<td>common white yarrow</td>
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<td>Asteraceae</td>
<td><em>Ageratina adenophora</em></td>
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<td>Asteraceae</td>
<td><em>Artemisia californica</em></td>
<td>California sagebrush</td>
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<td>Asteraceae</td>
<td><em>Artemisia douglasiana</em></td>
<td>mugwort</td>
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<td><em>Aster chilensis</em></td>
<td>California aster</td>
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<td><em>Baccharis douglasii</em></td>
<td>marsh baccharis</td>
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<td><em>Baccharis pilularis</em></td>
<td>coyote brush</td>
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<td>Asteraceae</td>
<td><em>Baccharis salicifolia</em></td>
<td>mulefat</td>
<td>shrub</td>
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<td>Asteraceae</td>
<td><em>Bellis perennis</em></td>
<td>English daisy</td>
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<td>Asteraceae</td>
<td><em>Blepharozonia plumosa</em></td>
<td>big tarweed</td>
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<tr>
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<td><em>Calendula arvensis</em></td>
<td>field-marigold</td>
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<td>non-native</td>
</tr>
<tr>
<td>Asteraceae</td>
<td><em>Carduus pycnocephalus</em></td>
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<td>Cal-IPC Moderate</td>
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<td>Asteraceae</td>
<td><em>Chamomilla suaveolens</em></td>
<td>pineapple weed</td>
<td>annual</td>
<td>non-native</td>
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</table>
### Vascular Plants of US 101 Express Lanes Project Biological Study Area

<table>
<thead>
<tr>
<th>Family</th>
<th>Species</th>
<th>Common Name</th>
<th>Life Cycle</th>
<th>Native Status</th>
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<tr>
<td>Asteraceae</td>
<td><em>Cirsium arvense</em></td>
<td>Canada thistle</td>
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<td>Mt. Hamilton fountain thistle</td>
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<td><em>Cirsium vulgare</em></td>
<td>bull thistle</td>
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<tr>
<td>Asteraceae</td>
<td><em>Conyza canadensis</em></td>
<td>Canada horseweed</td>
<td>annual</td>
<td>native</td>
</tr>
<tr>
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<td><em>Cynara cardunculus</em></td>
<td>artichoke thistle</td>
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<td>non-native</td>
</tr>
<tr>
<td>Asteraceae</td>
<td><em>Delairea odorata</em></td>
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<td>Cal-IPC High</td>
</tr>
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<td><em>Eriophyllum confertiflorum var. confertiflorum</em></td>
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<td>Asteraceae</td>
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<td>Asteraceae</td>
<td><em>Gnaphalium californicum</em></td>
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<td>native</td>
</tr>
<tr>
<td>Asteraceae</td>
<td><em>Gnaphalium canescens ssp. beneolens</em></td>
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<td>native</td>
</tr>
<tr>
<td>Asteraceae</td>
<td><em>Grindelia camporum</em></td>
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<td>native</td>
</tr>
<tr>
<td>Asteraceae</td>
<td><em>Hemizonia congesta ssp. luzulifolia</em></td>
<td>hayfield tarplant</td>
<td>annual</td>
<td>native</td>
</tr>
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<td>telegraph weed</td>
<td>annual</td>
<td>native</td>
</tr>
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<td>native</td>
</tr>
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<td>Asteraceae</td>
<td><em>Hypochaeris radicata</em></td>
<td>hairy cat's ear</td>
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<td>annual</td>
<td>non-native</td>
</tr>
<tr>
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<td><em>Lactuca serriola</em></td>
<td>prickly lettuce</td>
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<td>non-native</td>
</tr>
<tr>
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<td><em>Lasthenia californica</em></td>
<td>goldfields</td>
<td>annual</td>
<td>native</td>
</tr>
<tr>
<td>Asteraceae</td>
<td><em>Lasthenia sp.</em></td>
<td>goldfields</td>
<td>annual</td>
<td>native</td>
</tr>
<tr>
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<td><em>Lessingia filaginifolia</em></td>
<td>California aster</td>
<td>perennial</td>
<td>native</td>
</tr>
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<td>rare, CNPS List 1B.2</td>
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<td>daggerleaf cottonrose</td>
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<td>non-native</td>
</tr>
<tr>
<td>Asteraceae</td>
<td><em>Logfia filaginoides</em></td>
<td>California cottonrose</td>
<td>annual</td>
<td>native</td>
</tr>
<tr>
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<td><em>Picris echinodes</em></td>
<td>bristly ox-tongue</td>
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<td>Cal-IPC Limited</td>
</tr>
<tr>
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<td>annual</td>
<td>non-native</td>
</tr>
<tr>
<td>Asteraceae</td>
<td><em>Sonchus asper</em></td>
<td>spiny sowthistle</td>
<td>annual</td>
<td>non-native</td>
</tr>
<tr>
<td>Asteraceae</td>
<td><em>Sonchus oleraceus</em></td>
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## Vascular Plants of US 101 Express Lanes Project Biological Study Area

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<th>Native Status</th>
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### Vascular Plants of US 101 Express Lanes Project Biological Study Area

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### Vascular Plants of US 101 Express Lanes Project Biological Study Area

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<th>Family</th>
<th>Species</th>
<th>Common Name</th>
<th>Life Form</th>
<th>Status</th>
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<td>Scrophulariaceae</td>
<td>Verbascum thapsus</td>
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**Notes:**
- Native = Native California vascular plant
- Non-native = Non-native California vascular plant
- Cal-IPC High = Invasive plant species that have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure.
- Cal-IPC Moderate = Invasive plant species that have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure.
- Cal-IPC Limited = Invasive plant species that have minor ecological impacts on a statewide level or there was not enough information to justify a higher score.
- Horticulture = Horticultural vascular plant
- CNPS List 1B.1 = Plants with a rank of 1B are rare throughout their range, and the 0.1 means that over 80 percent of occurrences threatened.
- CNPS List 1B.2 = Plants with a rank of 1B are rare throughout their range, and the 0.2 means that 20 to 80 percent of occurrences are threatened.
- CNPS List 4.3 = Plant species of limited distribution (a watch list).
- Federally Threatened = Listed as threatened under the federal Endangered Species Act