



2565 Puesta Del Sol Road #3
Santa Barbara, CA 93105
(805) 682-2065
www.storrerenvironmental.com

**WETLAND DELINEATION AND
JURISDICTIONAL DETERMINATION REPORT
FOR THE
MTD SITE (APNs 67-230-026, 59-140-004,-005,-006)
4678 CALLE REAL, SANTA BARBARA COUNTY, CALIFORNIA**



Prepared for:

Suzanne Elledge Planning & Permitting Services, Inc.
1625 State Street, Suite 1
Santa Barbara, California 93101

Prepared By:

Storrer Environmental Services, LLC
2565 Puesta Del Sol Road #3
Santa Barbara, California 93105

May 2018

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1.0 INTRODUCTION

On behalf of Suzanne Elledge Planning and Permitting Services (SEPPS), Storrer Environmental Services, LLC (SES) identified and delineated the current geographic extent of waters of the U.S., including wetlands, for an approximately 19-acre site that is zoned for residential development (Survey Area).

The following Wetland Delineation and Jurisdictional Determination Report (Report) provides an assessment and delineation of U.S. Army Corps of Engineers (USACE) jurisdictional waters, including wetlands, California Department of Fish and Wildlife (CDFW) jurisdictional streambeds, and wetlands as defined by the County of Santa Barbara (County). This Report has been developed using (a) current Los Angeles District of the USACE and U.S. Environmental Protection Agency (EPA) guidance pertaining to jurisdictional delineations, and (b) a combination of 2018 field-based observations of site conditions and review of information available in the public domain (e.g., U.S. Geological Survey (USGS) 7.5' topographic quadrangle maps, the Natural Resources Conservation Service (NRCS) Soil Surveys, and aerial photographs from various sources). The results and recommendations offered in this Report are subject to final review and approval by the USACE.

1.1 PROJECT LOCATION AND DESCRIPTION

The Survey Area is located at 4678 Calle Real/149 N. San Antonio Road in unincorporated Santa Barbara County (County), California (APNs 59-140-004, 59-140-005, 59-140-006, 67-230-026) (Figure 1 – Site Vicinity Map). The Survey Area is an approximately 19-acre property (consisting of four contiguous parcels) that is bordered by N. San Antonio Road to the east, Calle Real to the south, and existing development to the north and west (Figure 2 – Survey Area Map). There is a fire access road dividing the westernmost parcel from the rest of the Survey Area to the east.

The property is zoned for residential development as a Housing Opportunity Site. A development plan and project description will be developed using this Report as a planning tool for avoidance and minimization of impacts to jurisdictional waters/wetlands.

2.0 EXISTING CONDITIONS

The Survey Area is within the Eastern Goleta Valley Community Plan area (Plan Area) which is located on the coastal plain and foothills east of City of Goleta and west of City of Santa Barbara. The Survey Area is specifically designated as “Urban Area” in the Eastern Goleta Valley Community Plan and is situated in the coastal lowlands, but outside of the Coastal Zone (County 2015) (Figure 1 – Site Vicinity Map). The Survey Area has historically been used as farmland for row crops and there is a degraded paved driveway in the southeastern quarter of the property that leads to an old, raised house site (County 2015). The property is now surrounded by residential development and is mowed periodically, as it is no longer used for agricultural purposes.

The terrain within the Survey Area is relatively flat to moderately sloped, with a short, steep berm running parallel to N. San Antonio Road along the eastern perimeter. The elevation reaches approximately 100 feet above sea level at the highest points in the northeastern southwestern corners. Stormwater runoff from N. San Antonio Road sheet flows down the berm into a small swale in the southeastern portion of the Survey Area. An unnamed drainage extends from the northwestern corner to the south-central boundary of the Survey Area, east of the fire access road (Figure 2 – Survey Area

Map). The drainage is ephemeral (i.e., conveying flows during and/or immediately following a rain event) and supports a stand of arroyo willows (*Salix lasiolepis*), numerous southern California black walnut trees, and coast live oak woodland (Appendix A – Site Photographs).

The drainage is culverted at both ends and conveys runoff from storms and the adjacent urban areas. A 24-inch culvert directs flow to the drainage from the residential neighborhood north of the Survey Area. A 36-inch culvert at the south end of the Survey Area directs flow under Calle Real and Highway 101 into a concrete v-ditch (Appendix A – Site Photographs). The v-ditch ties into Hospital Creek, approximately 0.4-mile to the south. Hospital Creek joins Atascadero Creek approximately 0.8-mile to the south. Atascadero Creek eventually discharges to the Pacific Ocean approximately 3.0 miles southwest of the Survey Area (Figure 3 – Connectivity Map).

Seven vegetation communities are present in the Survey Area: annual brome grassland, arroyo willow thicket, coast live oak woodland, western ragweed meadow, coyote brush scrub, upland mustard stand, and ornamental/landscaping plantings. Vegetation communities and land cover types within the Survey Area were mapped based on field observations and aerial imagery analysis and are depicted in Figure 4 – Vegetation Map.

3.0 REGULATORY FRAMEWORK

Wetlands and other waters in the Survey Area are potentially subject to a variety of federal, state, and local regulations, including the federal Clean Water Act (CWA), California Fish and Game Code, County Environmental Thresholds and Guidelines, and the Eastern Goleta Valley Community Plan. The federal, state, and local regulations applicable to the Survey Area are described below.

3.1 FEDERAL REGULATIONS

3.1.1 Clean Water Act – Section 404

Section 404 of the CWA regulates the discharge of dredged and/or fill material into waters of the U.S., including wetlands. Section 404 of the CWA is jointly administered and enforced by the USACE and the U.S. Environmental Protection Agency (EPA). Activities in waters of the U.S. regulated under Section 404 include dredge or fill for development, water resources projects (i.e., dams and levees), infrastructure development (i.e., highways and airports), and mining projects. With the exception of certain farming and forestry activities that are exempt from Section 404 regulation, a Section 404 permit is required before any dredged or fill material may be discharged into waters of the U.S.

The Section 404 program prohibits discharge of dredged or fill material if waters of the U.S. would be significantly degraded or a practical alternative exists that is less damaging to the aquatic environment. For the Project region, a Section 404 permit would be obtained from the Los Angeles District of the USACE.

3.1.1.1 Waters of the U.S.

The limit of USACE's jurisdiction in non-tidal waters extends to the ordinary high water mark (OHWM) and includes all adjacent wetlands.

Waters of the U.S. are defined as:

“All waters which are currently used, or 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; including all interstate waters including interstate wetlands, all other waters such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.”

U.S. Supreme Court decisions (i.e., Solid Waste Agency of Northern Cook County [SWANCC] v. USACE [531 U.S. 159, 2001] January 9, 2001 and Rapanos *et ux.*, *et al.* v. United States, June 19, 2006) have led to the development of federal guidance that requires a careful examination and documentation of the physical location(s) and hydrologic connections among waters and wetlands. To determine federal jurisdiction, particular focus is given to (1) surface hydrologic connections between a wetland and “navigable waters in fact,” (2) “adjacency” of a wetland to traditionally navigable waters, and thus (3) a “significant nexus” to interstate commerce. In addition, waters and wetlands features can be determined to be under federal jurisdiction by the USACE if a “significant nexus” can be shown between the wetland feature in question and its contribution to the maintenance or restoration of the physical, chemical, or biological integrity of downstream waters that are traditionally navigable.

3.1.1.2 USACE Jurisdictional Wetlands

Wetlands subject to Section 404 of the CWA are defined as:

“...those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

The *Corps of Engineers Wetland Delineation Manual* (1987 Manual) (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Arid West Supplement) (Environmental Laboratory 2008) provide technical guidance for identifying and delineating wetlands that may be subject to regulatory jurisdiction. The Arid West Supplement provides wetland indicators and additional guidance for delineation specific to the southwestern U.S. The delineation methods outlined in the 1987 Manual and the Arid West Supplement are based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. The USACE requires that a positive wetland indicator be present for all three parameters. Wetland indicators are described in further detail below.

Hydrophytic Vegetation. Hydrophytic plant species are those that can tolerate prolonged inundation or soil saturation during the growing season. The hydrophytic vegetation indicator is considered to be present when 50 percent or greater of the dominant plant species within the sample plot are classified as Obligate, Facultative Wetland, or Facultative according to the National Wetland Plant List (Lichvar et al. 2014, USACE 2018). The hydrophytic vegetation indicator can

also be determined using the “Prevalence Index” when hydric soils and wetland hydrology are present but vegetation fails to meet the “Dominance Test”.

Hydric Soils. Hydric soils are defined as soils “that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (Federal Register 1994). The technical criteria can be satisfied using a combination of published soils information and field indicators. Field indicators for determining whether a soil satisfies the hydric soil definition and the technical criteria for hydric soils are listed in the *Field Indicators of Hydric Soils in the United States* (USDA-NRCS 2010).

Wetland Hydrology. Wetland hydrology can be determined by evaluating a variety of direct and indirect field indicators. Direct indicators include aerial photography, stream gauge or well data, and historic records pertaining to the region. Indirect field indicators include, but are not limited to visual observation of inundation and/or saturation, sediment deposition, drainage patterns in wetlands, hydric soil characteristics, watermarks, drift lines, oxidized channels (i.e., rhizospheres) associated with living roots and rhizomes, and water stained leaves (Environmental Laboratory 1987). The Arid West Supplement provides a technical standard for wetland hydrology that requires 14 or more consecutive days of flooding or ponding, or a water table 12 inches or less below the soil surface, during the growing season at a minimum frequency of 5 years in 10 (Environmental Laboratory 2008).

3.2 STATE REGULATIONS

3.2.1 Clean Water Act – Section 401

The CWA Section 401 Water Quality Certification (Section 401 Certification) provides states and authorized tribes an opportunity to address the aquatic resource impacts of federally issued permits and licenses, to help protect water quality. Under Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity that may result in any discharge into waters of the U.S. must obtain a Section 401 Certification from the State Water Resources Control Board (SWRCB) that the proposed activity will comply with state water quality standards. In California, Section 401 Certifications are issued by Regional Water Quality Control Boards (RWQCB) located throughout the state. The Central Coast RWQCB issues Section 401 Certifications for projects in the County. The federal CWA Section 404 permit is dependent on and subject to the terms of the Section 401 Certification. Therefore, under Section 401, a federal agency cannot issue a permit or license for an activity that may result in discharge into waters of the U.S. until the RWQCB has granted or waived the Section 401 Certification. Section 401 Certification is limited to federally jurisdictional waters and wetlands.

3.2.2 California Fish and Game Code

Under Sections 1600-1616 of the California Fish and Game Code, the CDFW regulates all activity that may substantially divert or obstruct the natural flow of any river, stream, or lake; change or use any material from the bed, channel or bank of any river, stream, or lake; or, deposit debris, waste or other materials that could pass into any river, stream or lake. Notification of Lake or Streambed Alteration must be submitted to CDFW for such activities. CDFW defines a stream as:

“...a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes

watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.”

CDFW jurisdiction typically includes all portions of the bed, banks, and channel of a stream, including intermittent and ephemeral streams, and extends outward to the upland edge of the riparian vegetation.

3.3 LOCAL REGULATIONS

3.3.1 Stream and Riparian Habitat Protection

The *Environmental Thresholds and Guidelines Manual* (County 2008) defines riparian habitat as the “terrestrial or upland area adjacent to freshwater bodies, such as the banks of creeks and streams, the shores of lakes and ponds, and aquifers which emerge at the surface as springs or seeps. This habitat can also occur along arroyos and barrancas, and other types of drainages throughout the County”.

County-prescribed setbacks (i.e., buffer areas) from the outer (upland) edge of the riparian canopy, or the top-of-bank of the water body in the absence of riparian vegetation, are 100 feet in rural areas and 50 feet in urban areas. Intrusion within the buffer areas for riparian habitats and streams may be considered significant.

3.3.2 Santa Barbara County Wetland Definition

The County Board of Supervisors has formally adopted the USFWS/CDFW-wetland definition (Cowardin et al. 1979). Per the County *Environmental Thresholds and Guidelines Manual* (County 2008), the County wetland definition is as follows:

“For the purposes of this classification wetlands must have one or more of the following three attributes:

- 1) At least periodically the land supports predominantly hydrophytes (plants specifically adapted to live in wetlands);*
- 2) The substrate is predominantly undrained hydric (wetland) soil; and,*
- 3) The substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.”*

4.0 METHODS

The geographic extent of waters of the U.S., including wetlands, CDFW-jurisdictional streambeds, and County wetlands within the Survey Area were delineated using a combination of background literature review, applied field methods, and ArcGIS analysis. Wetland delineation field methods were consistent with the federal, state, and local policies and definitions described in Section 2.0 above.

This Report was prepared to document the current extent of jurisdictional waters of the U.S., including wetlands, as well as wetlands that meet the County criteria within the Survey Area. The wetland delineation was conducted on March 23, March 27 and April 18, 2018, by SES botanist, Jessica Peak and biologist, Justine Cooper.

4.1 REVIEW OF BACKGROUND MATERIALS

Prior to the field delineation, SES reviewed available public domain information including the NRCS Web Soil Survey of Santa Barbara County, California, South Coastal Part (NRCS 2018), USGS Santa Barbara, CA 7.5-minute quadrangle map, the National Hydrography Dataset (NHD) (USGS 2018), National Wetlands Inventory (USFWS 2018), and weather data.

4.2 DELINEATION OF WATERS OF THE U.S., INCLUDING WETLANDS

4.2.1 Waters of the U.S.

Pursuant to Section 401 of the CWA, the limit of USACE jurisdiction in non-tidal waters extends to the OHWM and includes all adjacent wetlands. The OHWM is an element used to identify the lateral limits of non-wetland waters based on stream geomorphology and vegetation response to the dominant stream discharge (Lichvar and McColley 2008). The OHWM was established along drainages in the Survey Area using debris racking and drainage patterns as a boundary. The width of the channel at the OHWM was mapped by using an iPad tablet with ArcCollector and a SkyPro XGPS160 Global Positioning System (GPS) receiver and jurisdictional acreages were calculated using aerial imagery and ArcGIS.

SES adhered to existing federal guidance for determination of federal jurisdiction in waters and wetlands in the Survey Area. To start, we recognized that the drainage is ephemeral and only holds water during and following rain events, and as a result of runoff from the residential neighborhood to the north. Consequently, the drainage is infrequently connected to Atascadero Creek (via Hospital Creek) downstream of the Survey Area, which discharges into the “traditionally navigable waters” of the Pacific Ocean.

4.2.2 Federal Wetlands

Delineation of the USACE-jurisdictional wetlands within the Survey Area was consistent with “Routine” procedures detailed in the 1987 Manual (Environmental Laboratory 1987) and the Arid West Supplement (Environmental Laboratory 2008).

The extent of the wetland features was determined by topographic changes in the terrain, presence of hydrophytic plant species, and the limits of drift deposits or drainage patterns. Soil test pits were excavated throughout the drainage to confirm the presence/absence of hydric soils (see Appendix B – Wetland Data Forms). The soil test pits (sampling points) and jurisdictional limits were mapped by using an iPad tablet with ArcCollector and a SkyPro XGPS160 GPS receiver. The radius of sample plots was 20 feet around the soil pit excavated at each sampling point. USACE-jurisdictional wetlands were determined to be present if evidence of all three federal criteria were observed (hydrophytic vegetation, hydric soils, and wetland hydrology).

4.2.2.1 Vegetation

Presence of hydrophytic vegetation was determined by identifying all plant species within an approximate 20-foot radius at each sampling point and assigning the indicator status, as listed in *The National Wetland Plant List: 2014 Update of Wetland Ratings* (Lichvar et al. 2014) and the *National Wetland Plant List (NWPL) Website* (USACE 2018). The indicator status refers the

relative frequency with which a plant species occurs in jurisdictional wetlands versus non-wetlands and are described as follows:

- **OBL** = Hydrophyte; obligate wetland plants that almost always occur in wetlands.
- **FACW** = Hydrophyte; facultative wetland plants that usually occur in wetlands, but may occur in non-wetlands.
- **FAC** = Hydrophyte; facultative plants that occur in wetlands and non-wetlands.
- **FACU** = Non-hydrophyte; facultative upland plants that usually occur in non-wetlands, but may occur in wetlands.
- **UPL** = Non-hydrophyte; obligate upland plants that almost never occur in wetlands.

Plant species not listed on the NWPL are considered UPL for wetland delineation purposes (Lichvar et al. 2014). The percent cover of all species in each of four strata (tree, sapling/shrub, herb, and woody vine) was determined within each sampling plot. Species identifications and taxonomic nomenclature follow *The Jepson Manual, Second Edition* (Baldwin et al. 2012) and *A Flora of the Santa Barbara Region, California, Second Edition* (Smith 1998). Dominant species were determined using the dominance test and/or prevalence index, when necessary, as recommended in the Arid West Supplement (Environmental Laboratory 2008).

4.2.2.2 Soils

The NRCS Web Soil Survey tool (NRCS 2018) was used to review soil types within the Survey Area. The presence of hydric soil indicators was determined in the field based on the criteria outlined in the 1987 Manual (Environmental Laboratory 1987) and information provided in the Arid West Supplement (Environmental Laboratory 2008) and the *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils* (USDA-NRCS 2010). Soil tests pits were excavated within the drainage to determine the presence or absence of hydric soils and wetland hydrology (i.e., sample points). Soil pits were dug to a maximum 16 inches, or until a restrictive layer prevented further excavation. A Munsell® Soil Color Chart (Munsell 2000) was used to identify the color of the soil matrix and redox features, if present. If positive wetland parameters were established, additional soil pits were excavated, as necessary, to determine the outer limits of each wetland feature.

4.2.2.3 Hydrology

Observations of wetland hydrology were conducted along the length of the drainage. Consistent with the 1987 Manual (Environmental Laboratory 1987) protocols in the Arid West Supplement (Environmental Laboratory 2008), each sampling point was evaluated for primary and secondary indicators of wetland hydrology. The presence or absence of indicators such as drift deposits, sediment deposits, and drainage patterns were used to determine wetland hydrology.

4.3 CDFW JURISDICTIONAL STREAMBEDS AND WETLANDS

Pursuant to Section 1600 *et seq.* of the California Fish and Game code, the extent of CDFW jurisdiction along the drainage was determined based on presence of a defined physical bed, bank, and channel. The extent of CDFW-defined one parameter wetlands corresponds to County

wetlands discussed below. The approximate length, width, and jurisdictional acreages were calculated using aerial imagery and ArcGIS.

4.4 COUNTY WETLANDS

The extent of County wetlands was determined concurrently with field delineation of federal wetlands. As defined by the *Environmental Thresholds and Guidelines Manual* (County 2008), County wetlands were determined to be present if evidence of one of the three federal wetland criteria were observed (hydrophytic vegetation, hydric soils, or wetland hydrology). The extent of County wetlands was determined in the field by drift deposits and drainage patterns. The limits of County wetlands were mapped by using an iPad tablet with ArcCollector and a SkyPro XGPS160 GPS receiver. Approximate jurisdictional acreages were calculated using ArcGIS.

5.0 RESULTS

The following sections provide a summary of environmental conditions in the Survey Area including climate, current land uses, soils, hydrology, and jurisdictional areas documented during the wetland delineation. Representative photographs of environmental conditions and jurisdictional waters and wetlands present in the Survey Area are provided in Appendix A.

5.1 CLIMATE AND HYDROLOGY

The Goleta region experiences a Mediterranean climate, with mild, moist winters and warm, dry summers. A heavy marine layer or fog is often present in late spring and early summer mornings. Temperatures at the Survey Area are relatively mild, with an average maximum temperature of 75 degrees Fahrenheit (F) in August and September and an average minimum temperature of 40 degrees (F) in December and January (Santa Barbara Station No. 047905) (WRCC 2018). Average annual precipitation is 16.34 inches, with the majority of that falling between November and April. The Subject Area is within the Atascadero Creek watershed (Hydrologic Unit Code [HUC] 18060013) and Santa Barbara County Subbasin (Site USGS 11120000) (USGS 2018). Goleta received 8.97 inches of rain thus far in the 2018 water year (water year runs from Sept 1 through Aug 31 and is designated by the calendar year in which it ends), which is 48% of the “Normal-to-Date” rainfall for the area (County 2018a).

The drainage in the western portion of the Survey Area contains water periodically due to a combination of runoff from adjacent residential neighborhoods to the north and winter stormwater. The drainage receives flow from the north through an existing 24-inch concrete box culvert. A narrow eroded channel, with evident bed and bank, directs flow from the culvert to an arroyo willow thicket (Appendix A – Site Photographs). At that point, bed and bank are no longer present and stormwater runoff sheet flows southward across the property through western ragweed meadow, annual brome grassland, and another arroyo willow thicket. Bed and bank are present again in the southernmost arroyo willow thicket, where stormwater runoff has created a second erosion feature (Figure 5 – Jurisdictional Waters and Wetlands Map). The southern channel directs flow under Calle Real through a 36-inch concrete box culvert, to Atascadero Creek (via Hospital Creek) and ultimately to the Pacific Ocean.

A storm event on March 20-22, 2018 resulted in approximately 3.28 inches of rainfall at the Survey Area (County 2018b). Standing water (approximately 1 to 4 inches deep) was observed in several locations along the drainage on March 23, 2018 (Appendix A – Site Photographs). Evidence of flow

(e.g., drainage patterns, debris racking) was present within the bed and bank of the northern and southern erosion features. The small swale in the southeastern portion of the Survey Area receives stormwater runoff from N. San Antonio Road, but no hydrology indicators were observed in the swale following the March 20-22, 2018 storm event or during wetland sampling.

No water was present in the Survey Area on March 27 or April 18, 2018 when wetland sampling occurred (Appendix B – Wetland Data Forms).

5.2 SOILS

Two mapped soil units have been identified in the Survey Area (Figure 6 – Soils Map):

- Elder sandy loam (EaB), 2 to 9 percent slopes
- Milpitas-Positas fine sandy loam (MeD2), 9 to 15 percent slopes, eroded

The majority of the Survey Area is comprised of Milpitas-Positas fine sandy loam, a moderately well drained sandy soil with an underlying restrictive clay layer that forms on moderately sloped terraces (9 to 15 percent slope) (NRCS 2017). Runoff can be of moderate concern due to the low permeability of the underlain clay layer. Milpitas-Positas fine sandy loam is present at SP08, which is located in the swale that receives runoff from N. San Antonio Road in the southeastern portion of the Survey Area (Figure 5 – Jurisdictional Waters and Wetlands Map).

The central portion of the Survey Area consists of Elder sandy loam and encompasses the drainage and associated waters/wetlands. Elder sandy loam is a well-drained soil derived from alluvium that forms on relatively flat landforms (alluvial fans, floodplains, and inset fans) (NRCS 2018). Elder sandy loam is present at SP01-SP07 and SP09 (Figure 5 – Jurisdictional Waters and Wetlands Map).

The presence of hydric soils was determined using a combination of direct field observations and review of the Web Soil Survey of Santa Barbara County, California, South Coastal Part (NRCS 2018). No hydric soil indicators were observed at any of the wetland Sample Points (SP01-SP09) (Appendix B – Wetland Data Forms).

5.3 JURISDICTIONAL WATERS AND WETLANDS

Soils pits were excavated and data were collected at nine sampling points within the Survey Area (see Appendix B – Wetland Data Forms, Figure 5 – Jurisdictional Waters and Wetlands Map). Waters/wetlands in the Survey Area are depicted in Figure 5 and described in detail below.

5.3.1 Waters of the U.S.

The erosion features in the northern and southern portions of the drainage have defined bed and banks, are periodically connected to downstream waters (i.e., Hospital Creek, Atascadero Creek), and are therefore likely to be considered jurisdictional waters under current federal guidance. Hydrology indicators (e.g., debris racking, drainage patterns) were observed in the channels of both the northern and southern erosion features on March 23 and March 28, 2018.

The channel in the northern erosion feature is narrow, approximately 90 feet long, and 2 to 3 feet wide and 12 to 24 inches deep at the OHWM. It has gradually sloped banks that range from 4 feet to 10 feet in height. The channel bottom is comprised of sediment and vegetation, with little to no

cobble. One (1) to 4 inches of standing water was observed in the channel in the northern erosion feature on March 23, 2018, approximately 24 hours after a storm event (Appendix A – Site Photographs).

The channel in the southern erosion feature is approximately 370 feet long and ranges from 3 to 6 feet wide and 12 to 36 inches deep at the OHWM. The banks are incised to moderately sloped and range from 4 feet to 10 feet in height and the channel bottom consists of sediment and cobble (Appendix A – Site Photographs). Evidence of flow (debris racking and drainage patterns) was observed in the channel in the southern erosion feature on March 23, 2018, but no standing water was present.

The area of USACE-jurisdictional waters of the U.S. extends to the OHWM on the banks of the northern and southern erosion features (0.20-acre) (Figure 5 – Jurisdictional Waters and Wetlands Map).

5.3.2 Federal Wetlands

None of the Sample Points met all three wetland criteria. Therefore, no federal-defined wetlands are present within the Survey Area.

5.3.3 CDFW Jurisdictional Streambed and Wetlands

The width of the northern and southern erosion features at the top of the bank (TOB) ranges from 5 to 20 feet wide. The erosion features are encompassed by either riparian vegetation or CDFW-defined wetland habitat. Therefore, the upland limit of CDFW jurisdiction along the drainage was determined based on the outer extent of riparian vegetation or CDFW-defined wetlands (Figure 5 – Jurisdictional Waters and Wetlands Map). Approximately 1.55 acres of CDFW-jurisdictional streambed and wetlands are present in the Survey Area. CDFW wetlands correspond to the County wetlands described below (i.e., one wetland parameter required).

5.3.4 County Wetlands

Hydrophytic vegetation (i.e., OBL, FACW, and FAC) is not dominant at any of the Sample Points within the drainage or in the swale off of N. San Antonio Road (Appendix B – Wetland Data Forms). Facultative (FAC) plant species in the western ragweed meadow and annual brome grasslands surrounding the drainage are limited to English plantain (*Plantago lanceolata*), patches of mugwort (*Artemisia douglasiana*), and scattered occurrences of curly dock (*Rumex crispus*). Throughout the western ragweed meadow these FAC plant species are co-dominant with upland annual grasses such as hare barley (*Hordeum murinum* ssp. *leporinum*; FACU), ripgut brome (*Bromus diandrus*; UPL), and soft chess (*Bromus hordeaceus*; FACU). Western ragweed (*Ambrosia psilostachya*; FACU) is also scattered throughout the drainage and into the surrounding annual brome grassland in lower quantities. Only one individual obligate (OBL) wetland plant, umbrella sedge (*Cyperus eragrostis*), was observed in the Survey Area at SP05. One Facultative (FAC) plant species, curly dock, was observed in low densities scattered throughout the swale off of N. San Antonio Road (Appendix A – Site Photographs).

Soils at the Sample Points consisted of sandy loam, typically with low sand content in the upper soil profile and higher sand content in the lower soil profile (Appendix A – Site Photographs). The

soil matrix colors (Munsell [2000] Colors) in the upper soil profile included very dark grayish brown (10 YR 3/2), dark brown (10 YR 3/3), and dark yellowish brown (10YR 3/4). Lower soil profile colors included brown (10 YR 4/3) and dark yellowish brown (10YR 3/4). No hydric soil indicators were observed at any of the Sample Points (SP01 – SP09).

A primary indicator of wetland hydrology (drift deposits) was observed at three of the nine wetland Sample Points (SP02, SP07, SP09) (Appendix A – Site Photographs). Therefore, portions of the drainage the meet the County wetland definition based on this one criterion. Drift deposits (e.g., oak leaves, twigs, etc.) were observed at all three locations and drainage patterns were also evident at SP02. The lateral extent of County wetlands was delineated based on presence of these hydrology indicators (0.27-acre).

6.0 SUMMARY OF REGULATORY AGENCY JURISDICTION

The unnamed drainage in the Survey Area contains USACE non-wetland Waters of the U.S., CDFW Streambed, and CDFW/County-defined (one parameter) wetlands. No USACE-defined wetlands are present in the Survey Area. The total acreages of waters/wetlands on-site that are subject to the permitting authority of the USACE, CDFW, and County are summarized in Table 1 below.

Table 1 – Jurisdictional Acreages within the Survey Area

Location	<u>Waters of the U.S.</u>		CDFW-Jurisdictional Streambed/Wetlands (Acres) ¹	County Wetlands (Acres)
	Non-wetland Waters (Acres)	USACE-defined Wetlands (Acres)		
Unnamed Drainage	0.20	0	1.55	0.27
Swale from N. San Antonio Road	0	0	0	0
Totals:	0.20		1.55	0.27

¹ Acreage for CDFW-jurisdictional areas includes County wetlands.

6.1 U.S. ARMY CORPS OF ENGINEERS

As reported above, there are no USACE-jurisdictional wetlands within the Survey Area. Approximately 0.20-acre of waters of the U.S. was identified and mapped within the Survey Area. USACE jurisdiction extends to the OHWM on the banks of the northern and southern erosion features within the drainage.

This delineation is conditional upon review and final jurisdictional determination by the USACE. USACE-defined waters are also subject to the permitting authority of the County.

6.2 CDFW JURISDICTIONAL STREAMBED AND WETLANDS

Approximately 1.55 acres of CDFW jurisdictional streambed/wetlands were identified and mapped within the Survey Area. The limits of CDFW jurisdiction extends to the outer edge of the riparian vegetation, the outer edge of CDFW-defined wetlands, or the TOB, whichever is greater.

The CDFW administers Streambed Alteration Agreements under Sections 1600-1607 of the Fish & Game Code. Sections 1600-1607 address any project that will “(1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake designated by the department [California Fish and Wildlife] in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit, (2) use materials from the streambeds designated by the department, or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass in to any river, stream, or lake designated by the department” (Section 1601). A Streambed Alteration Agreement is required for any work occurring within a water or wetland with defined bed and bank features.

6.3 CENTRAL COAST REGIONAL WATER QUALITY CONTROL BOARD

The drainage periodically discharges stormwater runoff into downstream waters (i.e., Hospital Creek, Atascadero Creek, and Pacific Ocean). The Central Coast RWQCB regulates work involving discharge of pollutants into waters/wetlands under Section 402 of the CWA and the National Pollutant Discharge Elimination System permit (NPDES) program. Under the NPDES program, projects involving discharge of pollutants into waters/wetlands must have a Stormwater Pollution Prevention Plan (SWPPP), which is reviewed and approved by the Central Coast RWQCB and the County.

6.4 COUNTY OF SANTA BARBARA

The Survey Area contains 0.27-acre of one parameter wetlands and 1.28 acres of riparian habitat that are subject to the permitting authority of the County. Project-related impacts to County wetlands or streams/riparian areas must be mitigated or avoided, consistent with County land use policies protecting streams and wetlands. Per the *Environmental Thresholds and Guidelines Manual* (County 2008), the County-prescribed setback for wetland and stream habitats is 50 feet in urban areas. Intrusion within the buffer areas for wetland and riparian habitats may be considered significant.

7.0 LITERATURE CITED

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FIGURES



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San Luis Obispo, CA. 93401
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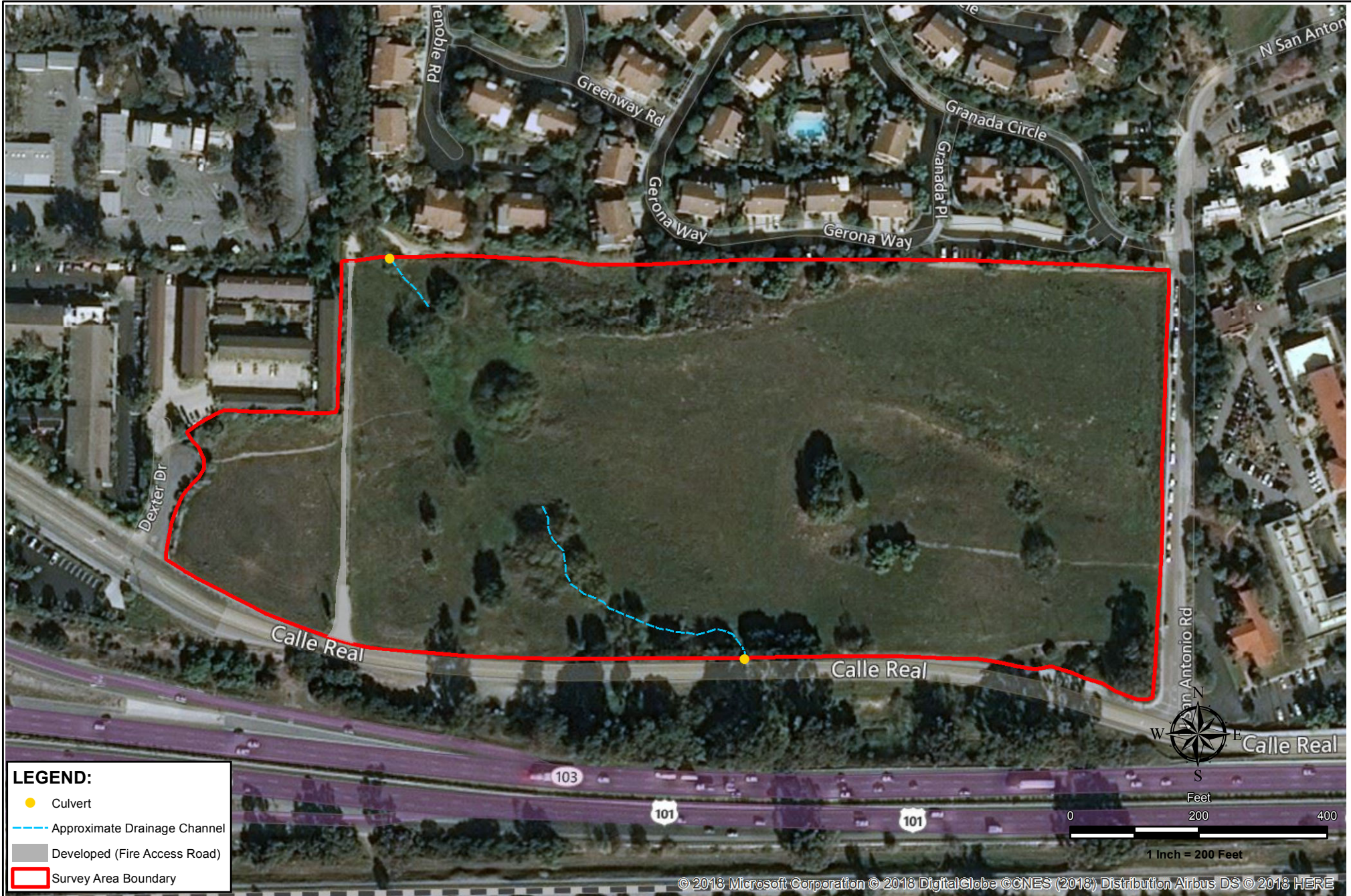


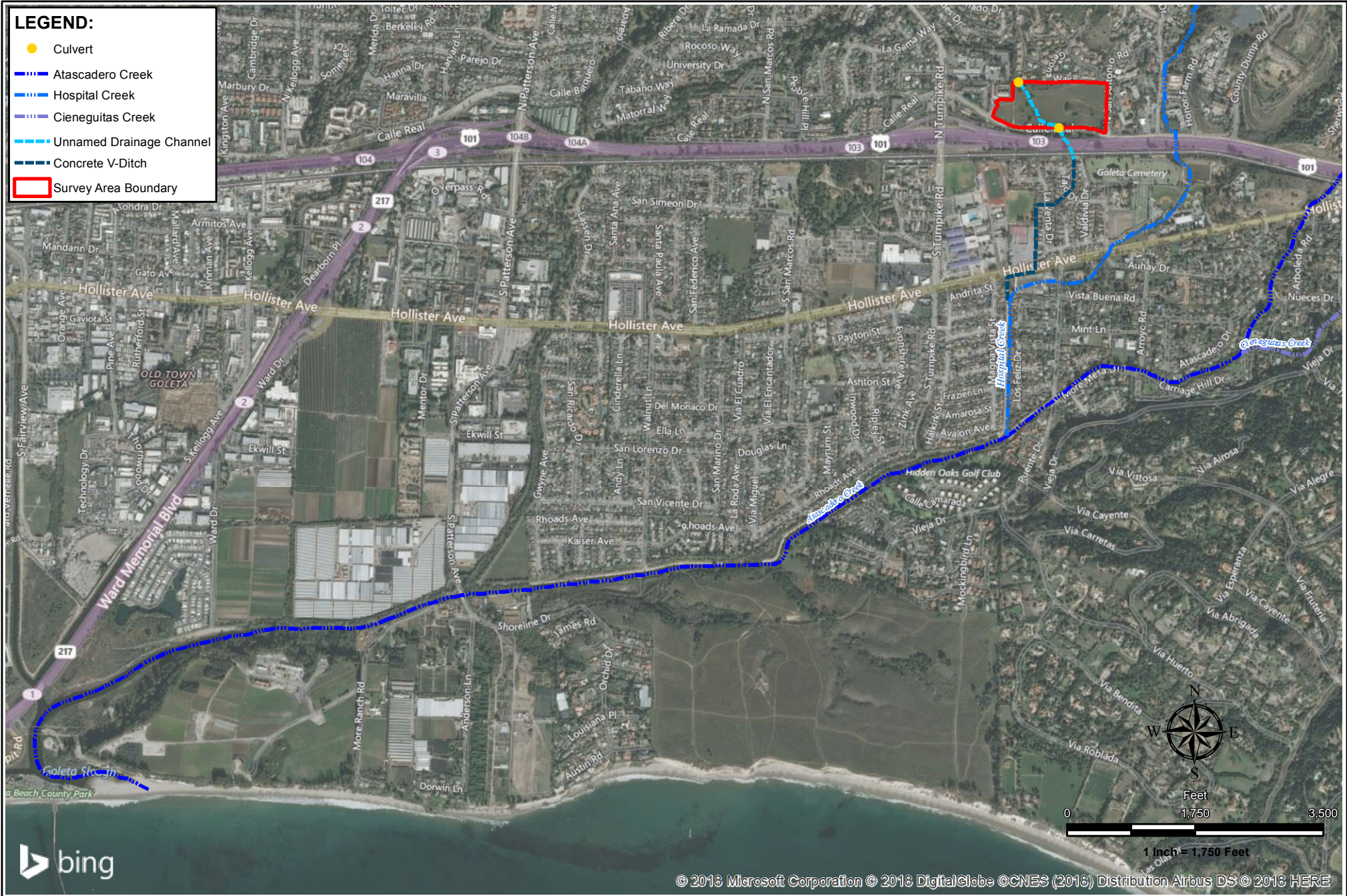
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Site Vicinity Map
Santa Barbara Metropolitan Transit District (MTD)
Calle Real Property

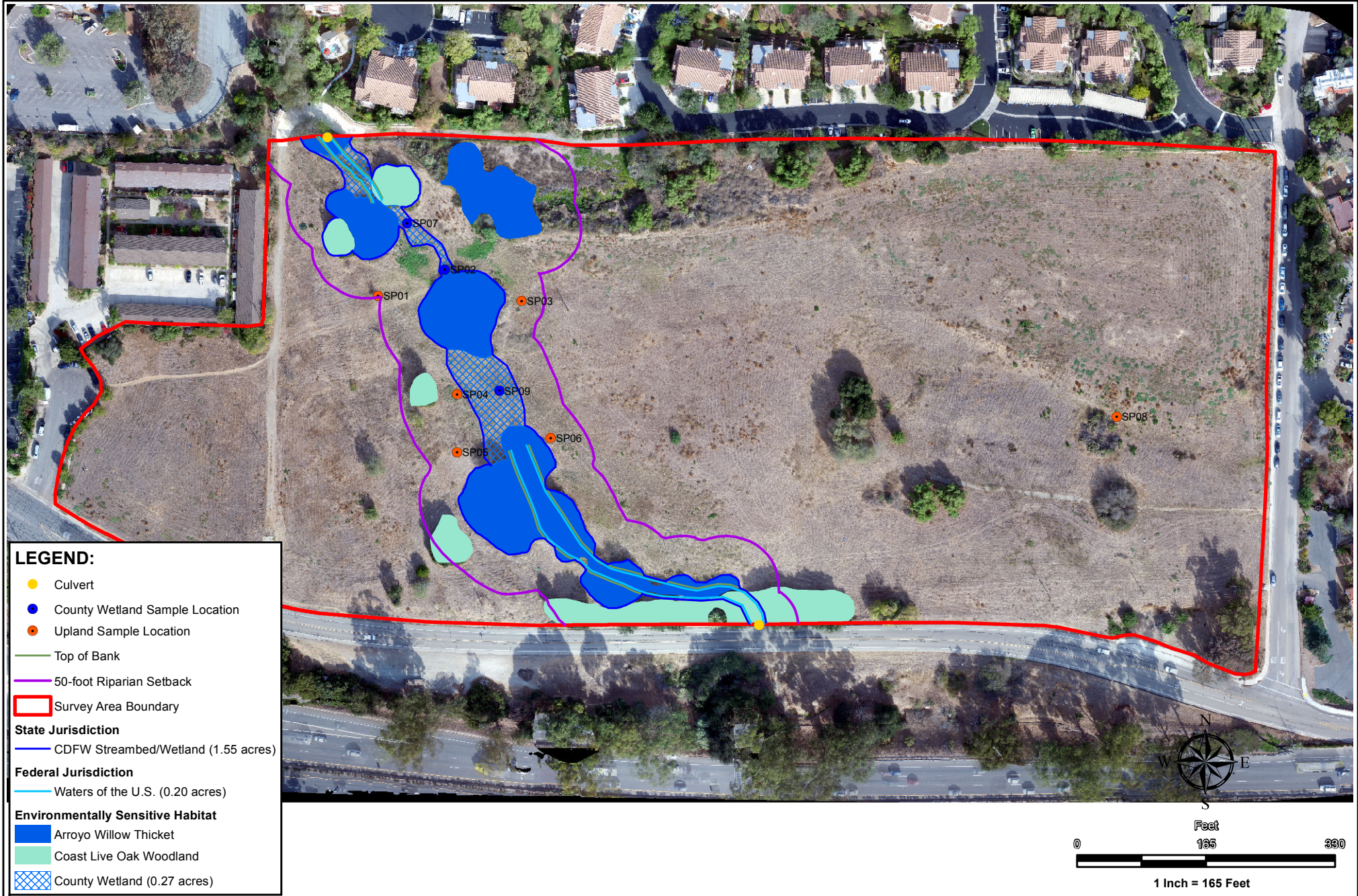
Figure 1

April 24, 2018









Terra Solutions
777 Mutsuhito Avenue
San Luis Obispo, CA. 93401
(805) 782-0969



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**Jurisdictional Waters and Wetland Map
Santa Barbara Metropolitan Transit District (MTD)
Calle Real Property**

Figure 5

April 25, 2018



APPENDIX A
SITE PHOTOGRAPHS



Photo 1. View of the drainage from the northwest corner of site (Aspect: Southeast). Photo taken March 23, 2018



Photo 2. Sample Point SP01 located along the eastern side of the drainage adjacent to a southern California black walnut (Aspect: Northeast). Photo taken March 27, 2018.



Photo 3. Culvert on the northern Survey Area boundary that receives runoff from the residential neighborhood (Aspect: North). Photo taken March 23, 2018.



Photo 4. Culvert at the south end of the drainage that conveys runoff under Calle Real and Hwy 101 to Hospital Creek (Aspect: Southeast). Photo taken March 23, 2018.



Photo 5. Eroded channel in northern portion of drainage (Aspect: North). Several inches of standing water was present 24 hours after a rain event. Photo taken March 23, 2018.



Photo 6. Channel in southern erosion feature (Aspect: Northwest). Drainage patterns and debris racking were evident in channel. Photo taken March 23, 2018.



Photo 7. Swale in southeast corner of the Survey Area that receives runoff from N. San Antonio Road (Aspect: West). Photo taken March 27, 2018.



Photo 8. Sample Point SP08 located in swale off N. San Antonio Road (Aspect: West). Photo taken March 27, 2018.



Photo 9. Sample Point SP07 located in the County wetland (Aspect: South). Drift deposits (oak leaves, twigs) visible behind soil pit and shovel. Photo taken March 27, 2018.



Photo 10. Standing water observed at Sample Point SP02, located in the County wetland, 24 hours after a storm event (Aspect: Southeast). Photo taken March 23, 2018.



Photo 11. Sample Point SP04 located in a patch of mugwort in the central portion of the drainage (Aspect: North). No wetland indicators were observed. Photo taken March 27, 2018.



Photo 12. Sample Point SP05 during wetland data collection 5 days after a storm event (Aspect: North). No wetland indicators were observed. Photo taken March 27, 2018.



Photo 13. Soil excavated from SP05. Soil color was dark brown (10YR 3/3) with moderate sand content. Photo taken March 27, 2018.



Photo 14. Sample Point SP09 located in the County wetland (Aspect: South). Photo taken April 18, 2018.

APPENDIX B
WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: MTD SITE (APNS 67-230-026, 59-140-004.-005.-006) City/County: Santa Barbara/Santa Barbara Sampling Date: March 27, 2018

Applicant/Owner: Metropolitan Transit District State: CA Sampling Point: SP01

Investigator(s): Jessica Peak, Justine Cooper Section, Township, Range: _____

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): C Lat: 34.44380 Long: -119.78564 Datum: _____

Soil Map Unit Name: EaB - Elder sandy loam NWI classification: None

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? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Juglans californica</u>	<u>2</u>	<u>yes</u>	<u>FACU</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
50% = _____, 20% = _____	<u>2</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20 ft radius)				Prevalence Index worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total % Cover of : _____ Multiply by:
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	OBL species _____ x1 = _____
5. _____	_____	_____	_____	FACW species _____ x2 = _____
50% = _____, 20% = _____	_____	= Total Cover		FAC species _____ x3 = _____
Herb Stratum (Plot size: 20 ft radius)				FACU species _____ x4 = _____
1. <u>Bromus diandrus</u>	<u>90</u>	<u>yes</u>	<u>UPL</u>	UPL species _____ x5 = _____
2. <u>Plantago lanceolata</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	Column Totals: _____ (A) _____ (B)
3. <u>Brassica rapa</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	Prevalence Index = B/A = <u>4.5</u>
4. <u>Geranium molle</u>	<u>2</u>	<u>no</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators:
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	<input type="checkbox"/> Dominance Test is >50%
7. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
8. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
50% = _____, 20% = _____	<u>107</u>	= Total Cover		<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 20 ft radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			
Remarks: Vegetation dominated by upland annual grasses/mustards.				

SOILSampling Point: SP01**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	_____	_____	_____	_____	sandy loam	low sand content
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?Yes ☐No ☒

Remarks: No restrictive layer, no redox features, no hydric soil indicators.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input checked="" type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐No ☒

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

Remarks: Drainage patterns evident, vegetation bent over by water/flow from storm event on March 20-22, 2018.

US Army Corps of Engineers

Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: MTD SITE (APNS 67-230-026, 59-140-004.-005.-006) City/County: Santa Barbara/Santa Barbara Sampling Date: March 27, 2018

Applicant/Owner: Metropolitan Transit District State: CA Sampling Point: SP02

Investigator(s): Jessica Peak, Justine Cooper Section, Township, Range: _____

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): C Lat: 34.44390 Long: -119.78553 Datum: _____

Soil Map Unit Name: EaB - Elder sandy loam NWI classification: None

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? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: One parameter ("County") wetland; delineated by drift deposits and drainage patterns.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Salix lasiolepis</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>20</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20 ft radius)				Prevalence Index worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	OBL species <u>0</u> x1 = <u>0</u>
3. _____	_____	_____	_____	FACW species <u>20</u> x2 = <u>40</u>
4. _____	_____	_____	_____	FAC species <u>3</u> x3 = <u>9</u>
5. _____	_____	_____	_____	FACU species <u>1</u> x4 = <u>4</u>
50% = _____, 20% = _____	_____	= Total Cover		UPL species <u>101</u> x5 = <u>505</u>
Herb Stratum (Plot size: 20 ft radius)				Column Totals: <u>125</u> (A) <u>558</u> (B)
1. <u>Bromus diandrus</u>	<u>90</u>	<u>yes</u>	<u>UPL</u>	Prevalence Index = B/A = <u>4.5</u>
2. <u>Plantago lanceolata</u>	<u>2</u>	<u>no</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:
3. <u>Bromus catharticus</u>	<u>1</u>	<u>no</u>	<u>FACU</u>	
4. <u>Geranium molle</u>	<u>10</u>	<u>no</u>	<u>UPL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
5. <u>Hordeum murinum</u>	<u>1</u>	<u>no</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. <u>Sonchus asper</u>	<u>1</u>	<u>no</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>105</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Woody Vine Stratum (Plot size: 20 ft radius)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			

Remarks: Ponded water observed at SP02 on 3/23/18; Vegetation dominated by upland annual grasses with the exception of adjacent large willow.

SOILSampling Point: SP02**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-3	10YR 3/2	100	_____	_____	_____	_____	sandy loam	low sand content
3-12	10YR 4/3	100	_____	_____	_____	_____	sandy loam	high sand content
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?Yes ☐No ☒

Remarks: No restrictive layer, no redox features, no hydric soil indicators; matrix from 3-12 in much more sandy than upper 3 in.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|---|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input checked="" type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input checked="" type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☒No ☐

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

Remarks: Two inches of standing water observed at SP02 on 3/23/18 following storm event on March 20-22. Drift deposits and drainage patterns evident, vegetation bent over by water/flow.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: MTD SITE (APNS 67-230-026, 59-140-004.-005.-006) City/County: Santa Barbara/Santa Barbara Sampling Date: March 27, 2018
 Applicant/Owner: Metropolitan Transit District State: CA Sampling Point: SP03
 Investigator(s): Jessica Peak, Justine Cooper Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): swale, slight depression Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): C Lat: 34.44380 Long: -119.78504 Datum: _____
 Soil Map Unit Name: EaB - Elder sandy loam NWI classification: None
 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? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: 20 ft radius)				Prevalence Index worksheet:	
1. <u>Baccharis pilularis</u>	<u>1</u>	<u>yes</u>	<u>UPL</u>	Total % Cover of : Multiply by:	
2. _____	_____	_____	_____	OBL species	_____ x1 = _____
3. _____	_____	_____	_____	FACW species	_____ x2 = _____
4. _____	_____	_____	_____	FAC species	_____ x3 = _____
5. _____	_____	_____	_____	FACU species	_____ x4 = _____
50% = _____, 20% = _____	<u>1</u>	= Total Cover		UPL species	_____ x5 = _____
Herb Stratum (Plot size: 20 ft radius)				Column Totals:	_____ (A) _____ (B)
1. <u>Bromus diandrus</u>	<u>90</u>	<u>yes</u>	<u>UPL</u>	Prevalence Index = B/A = <u>4.5</u>	
2. <u>Plantago lanceolata</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. <u>Brassica rapa</u>	<u>1</u>	<u>no</u>	<u>FACU</u>	<input type="checkbox"/> Dominance Test is >50%	
4. <u>Geranium molle</u>	<u>5</u>	<u>no</u>	<u>UPL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
5. <u>Bromus hordeaceus</u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. <u>Medicago polymorpha</u>	<u>1</u>	<u>no</u>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
7. <u>Stipa miliacea</u>	<u>5</u>	<u>no</u>	<u>UPL</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. <u>Avena barbata</u>	<u>1</u>	<u>no</u>	<u>UPL</u>		
50% = _____, 20% = _____	<u>113</u>	= Total Cover			
Woody Vine Stratum (Plot size: 20 ft radius)				Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
2. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>				
Remarks: Vegetation dominated by upland annual grasses.					

SOILSampling Point: SP03**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	100	_____	_____	_____	_____	sandy loam	small patch of lighter sand at 8 in
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) **(LRR C)**
☐ 1 cm Muck (A9) **(LRR D)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No restrictive layer, no redox features, no hydric soil indicators.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ 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)
☐ 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): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: No hydrology indicators observed.

US Army Corps of Engineers

Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: MTD SITE (APNS 67-230-026, 59-140-004.-005.-006) City/County: Santa Barbara/Santa Barbara Sampling Date: March 27, 2018
 Applicant/Owner: Metropolitan Transit District State: CA Sampling Point: SP04
 Investigator(s): Jessica Peak, Justine Cooper Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 0
 Subregion (LRR): C Lat: 34.443468 Long: -119.785306 Datum: _____
 Soil Map Unit Name: EaB - Elder sandy loam NWI classification: None
 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? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20 ft radius)				
1. <u>Baccharis pilularis</u>	<u>1</u>	<u>yes</u>	<u>UPL</u>	Prevalence Index worksheet: Total % Cover of : _____ Multiply by: OBL species <u>0</u> x1 = <u>0</u> FACW species <u>0</u> x2 = <u>0</u> FAC species <u>81</u> x3 = <u>243</u> FACU species <u>6</u> x4 = <u>24</u> UPL species <u>23</u> x5 = <u>115</u> Column Totals: <u>110</u> (A) <u>382</u> (B) Prevalence Index = B/A = <u>3.47</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>1</u>	= Total Cover		
Herb Stratum (Plot size: 20 ft radius)				
1. <u>Bromus diandrus</u>	<u>20</u>	<u>yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Plantago lanceolata</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	
3. <u>Artemisia douglasiana</u>	<u>60</u>	<u>yes</u>	<u>FAC</u>	
4. <u>Geranium molle</u>	<u>2</u>	<u>no</u>	<u>UPL</u>	
5. <u>Hordeum murinum</u>	<u>5</u>	<u>no</u>	<u>UPL</u>	
6. <u>Brassica rapa</u>	<u>1</u>	<u>no</u>	<u>FACU</u>	
7. <u>Ambrosia psilostachya</u>	<u>1</u>	<u>no</u>	<u>FACU</u>	
8. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>109</u>	= Total Cover		
Woody Vine Stratum (Plot size: 20 ft radius)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			
Remarks: Vegetation dominated by mugwort, English plantain, and upland annual grasses.				

SOILSampling Point: SP04**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100	_____	_____	_____	_____	sandy loam	_____
2-14	10YR 4/3	100	_____	_____	_____	_____	sandy loam	high sand content
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?Yes ☐No ☒

Remarks: No restrictive layer, no redox features, no hydric soil indicators.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐No ☒

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

Remarks: No drainage patterns evident. No hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: MTD SITE (APNS 67-230-026, 59-140-004.-005.-006) City/County: Santa Barbara/Santa Barbara Sampling Date: March 27, 2018
 Applicant/Owner: Metropolitan Transit District State: CA Sampling Point: SP05
 Investigator(s): Jessica Peak, Justine Cooper Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): small depression Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): C Lat: 34.443265 Long: -119.785302 Datum: _____
 Soil Map Unit Name: EaB - Elder sandy loam NWI classification: None
 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? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: <u>small depression bermed on south end; ponded water observed on 3/23/2018 at SP05 following storm event.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)																								
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
50% = _____, 20% = _____	_____	= Total Cover																										
Sapling/Shrub Stratum (Plot size: 20 ft radius)																												
1. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td colspan="2"><u>Total % Cover of :</u></td> <td><u>Multiply by:</u></td> </tr> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td><u>4</u></td> <td>x2 = <u>8</u></td> </tr> <tr> <td>FAC species</td> <td><u>65</u></td> <td>x3 = <u>195</u></td> </tr> <tr> <td>FACU species</td> <td><u>2</u></td> <td>x4 = <u>8</u></td> </tr> <tr> <td>UPL species</td> <td><u>40</u></td> <td>x5 = <u>200</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>111</u> (A)</td> <td><u>411</u> (B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A = <u>3.7</u></td> </tr> </table>	<u>Total % Cover of :</u>		<u>Multiply by:</u>	OBL species	<u>0</u>	x1 = <u>0</u>	FACW species	<u>4</u>	x2 = <u>8</u>	FAC species	<u>65</u>	x3 = <u>195</u>	FACU species	<u>2</u>	x4 = <u>8</u>	UPL species	<u>40</u>	x5 = <u>200</u>	Column Totals:	<u>111</u> (A)	<u>411</u> (B)	Prevalence Index = B/A = <u>3.7</u>		
<u>Total % Cover of :</u>		<u>Multiply by:</u>																										
OBL species	<u>0</u>	x1 = <u>0</u>																										
FACW species	<u>4</u>	x2 = <u>8</u>																										
FAC species	<u>65</u>	x3 = <u>195</u>																										
FACU species	<u>2</u>	x4 = <u>8</u>																										
UPL species	<u>40</u>	x5 = <u>200</u>																										
Column Totals:	<u>111</u> (A)	<u>411</u> (B)																										
Prevalence Index = B/A = <u>3.7</u>																												
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
50% = _____, 20% = _____	_____	= Total Cover																										
Herb Stratum (Plot size: 20 ft radius)																												
1. <u>Bromus diandrus</u>	<u>20</u>	<u>yes</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
2. <u>Plantago lanceolata</u>	<u>25</u>	<u>yes</u>	<u>FAC</u>																									
3. <u>Rumex crispus</u>	<u>40</u>	<u>yes</u>	<u>FAC</u>																									
4. <u>Bromus hordeaceus</u>	<u>20</u>	<u>yes</u>	<u>UPL</u>																									
5. <u>Hordeum murinum</u>	<u>1</u>	<u>no</u>	<u>FACU</u>																									
6. <u>Brassica rapa</u>	<u>1</u>	<u>no</u>	<u>FACU</u>																									
7. <u>Cyperus eragrostis</u>	<u>2</u>	<u>no</u>	<u>FACW</u>																									
8. <u>Artemisia douglasiana</u>	<u>2</u>	<u>no</u>	<u>FACW</u>																									
50% = _____, 20% = _____	<u>111</u>	= Total Cover																										
Woody Vine Stratum (Plot size: 20 ft radius)																												
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																								
2. _____	_____	_____	_____																									
50% = _____, 20% = _____	_____	= Total Cover																										
% Bare Ground in Herb Stratum <u>5</u>	% Cover of Biotic Crust <u>0</u>																											
Remarks: <u>Vegetation dominated by curly dock, English plantain, and upland annual grasses.</u>																												

SOILSampling Point: SP05**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-16	10YR 3/3	100	_____	_____	_____	_____	sandy loam	moderate sand content
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?Yes ☐No ☒

Remarks: No restrictive layer, no redox features, no hydric soil indicators.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> 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)
- ☐ 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): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐No ☒

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

Remarks: Ponded water observed at SP05 on 3/23/18 following storm event; small depression holds water temporarily after rain events.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: MTD SITE (APNS 67-230-026, 59-140-004.-005.-006) City/County: Santa Barbara/Santa Barbara Sampling Date: March 27, 2018
 Applicant/Owner: Metropolitan Transit District State: CA Sampling Point: SP06
 Investigator(s): Jessica Peak, Justine Cooper Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 1-2
 Subregion (LRR): C Lat: 34.443321 Long: -119.784907 Datum: _____
 Soil Map Unit Name: EaB - Elder sandy loam NWI classification: None
 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? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	3 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	33 (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: 20 ft radius)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 20 ft radius)				Column Totals: _____ (A)	_____ (B)
1. <u>Bromus hordeaceus</u>	30	yes	UPL	Prevalence Index = B/A = 4.5	
2. <u>Plantago lanceolata</u>	50	yes	FAC		
3. <u>Bromus diandrus</u>	40	yes	UPL		
4. <u>Hordeum murinum</u>	2	no	FACU		
5. <u>Artemisia douglasiana</u>	1	no	FAC		
6. <u>Brassica nigra</u>	2	no	UPL		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
50% = _____, 20% = _____	125	= Total Cover			
Woody Vine Stratum (Plot size: 20 ft radius)				Hydrophytic Vegetation Indicators:	
1. _____	_____	_____	_____	<input type="checkbox"/> Dominance Test is >50%	
2. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
50% = _____, 20% = _____	_____	= Total Cover		<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
Remarks: Vegetation dominated by English platan and upland annual grasses.				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

SOILSampling Point: SP06**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-7	10YR 3/3	100	_____	_____	_____	_____	sandy loam	moderate sand content
7-13	10YR 3/4	100	_____	_____	_____	_____	sandy loam	higher sand content than upper 7 in
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?Yes ☐No ☒

Remarks: No restrictive layer, no redox features, no hydric soil indicators.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**Yes ☐No ☒

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

Remarks: No hydrology indicators observed.

US Army Corps of Engineers

Arid West – Version 2.0

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: MTD SITE (APNS 67-230-026, 59-140-004.-005.-006) City/County: Santa Barbara/Santa Barbara Sampling Date: March 27, 2018

Applicant/Owner: Metropolitan Transit District State: CA Sampling Point: SP07

Investigator(s): Jessica Peak, Justine Cooper Section, Township, Range: _____

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 1-2

Subregion (LRR): C Lat: 34.444066 Long: -119.785532 Datum: _____

Soil Map Unit Name: EaB - Elder sandy loam NWI classification: None

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? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: One parameter ("County") wetland; delineated by drift deposits.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u>Salix lasiolepis</u>	1	yes	FACW	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: 3 (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)
50% = _____, 20% = _____	1	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20 ft radius)				Prevalence Index worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total % Cover of : Multiply by:
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	OBL species _____ x1 = _____
5. _____	_____	_____	_____	FACW species _____ x2 = _____
50% = _____, 20% = _____	_____	= Total Cover		FAC species _____ x3 = _____
Herb Stratum (Plot size: 20 ft radius)				FACU species _____ x4 = _____
1. <u>Bromus hordeaceus</u>	20	yes	UPL	UPL species _____ x5 = _____
2. <u>Bromus diandrus</u>	80	yes	UPL	Column Totals: _____ (A) _____ (B)
3. <u>Brassica nigra</u>	5	no	UPL	Prevalence Index = B/A = 4.5
4. <u>Plantago lanceolata</u>	2	no	FAC	Hydrophytic Vegetation Indicators:
5. <u>Brassica rapa</u>	2	no	FACU	
6. <u>Hordeum murinum</u>	1	no	FACU	<input type="checkbox"/> Dominance Test is >50%
7. <u>Foeniculum vulgare</u>	1	no	UPL	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
8. <u>Ambrosia psilostachya</u>	1	no	FACU	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
50% = _____, 20% = _____	112	= Total Cover		<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: 20 ft radius)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			
Remarks: Vegetation dominated by upland annual grasses.				

Project Site: MTD Site**SOIL**Sampling Point: SP07**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-8	10YR 3/4	100	_____	_____	_____	_____	sandy loam	minimal sand content
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) **(LRR C)**
☐ 1 cm Muck (A9) **(LRR D)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**Type: RockDepth (Inches): 8 in**Hydric Soils Present?**

Yes

☐

No

☒

Remarks: Restrictive layer at 8 inches, no redox features, no hydric soil indicators.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ 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)
☐ 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): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Drift deposits (oak leaves) evident from flow from the culvert in the NW corner of the property.

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: MTD SITE (APNS 67-230-026, 59-140-004.-005.-006) City/County: Santa Barbara/Santa Barbara Sampling Date: March 27, 2018

Applicant/Owner: Metropolitan Transit District State: CA Sampling Point: SP08

Investigator(s): Jessica Peak, Justine Cooper Section, Township, Range: _____

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 5

Subregion (LRR): C Lat: 34.44343 Long: -119.782508 Datum: _____

Soil Map Unit Name: MeD2 Milpitas-Positas Fine Sandy Loam NWI classification: None

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? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Swale on SE part of property that receives runoff from San Antonio Road.</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20 ft radius)				Prevalence Index worksheet:
1. <u>Baccharis pilularis</u>	<u>5</u>	<u>yes</u>	<u>UPL</u>	
2. _____	_____	_____	_____	OBL species _____ x1 = _____
3. _____	_____	_____	_____	FACW species _____ x2 = _____
4. _____	_____	_____	_____	FAC species _____ x3 = _____
5. _____	_____	_____	_____	FACU species _____ x4 = _____
50% = _____, 20% = _____	<u>5</u>	= Total Cover		UPL species _____ x5 = _____
Herb Stratum (Plot size: 20 ft radius)				Column Totals: _____ (A) _____ (B)
1. <u>Bromus diandrus</u>	<u>70</u>	<u>yes</u>	<u>UPL</u>	Prevalence Index = B/A = <u>4.5</u>
2. <u>Hordeum murinum</u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	
3. <u>Medicago polymorpha</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	
4. <u>Geranium molle</u>	<u>5</u>	<u>no</u>	<u>UPL</u>	
5. <u>Brassica nigra</u>	<u>2</u>	<u>no</u>	<u>UPL</u>	
6. <u>Oxalis pes-caprae</u>	<u>1</u>	<u>no</u>	<u>FACU</u>	
7. <u>Stipa miliaceum</u>	<u>1</u>	<u>no</u>	<u>UPL</u>	
8. _____	_____	_____	_____	
50% = _____, 20% = _____	<u>114</u>	= Total Cover		
Woody Vine Stratum (Plot size: 20 ft radius)				Hydrophytic Vegetation Indicators:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
50% = _____, 20% = _____	_____	= Total Cover		<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>			<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks: <u>Vegetation dominated by upland annual grasses. Scattered Rumex crispus in swale.</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

SOILSampling Point: SP08**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-14	10YR 3/4	100	_____	_____	_____	_____	sandy loam	minimal sand content
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No restrictive layer, no redox features, no hydric soil indicators.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Thin Muck Surface (C7) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:Surface Water Present? Yes ☐ No ☒ Depth (inches): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**

Yes

☐

No

☒

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

Remarks: No drainage patterns, no hydrology indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: MTD SITE (APNS 67-230-026, 59-140-004.-005.-006) City/County: Santa Barbara/Santa Barbara Sampling Date: April 18, 2018

Applicant/Owner: Metropolitan Transit District State: CA Sampling Point: SP09

Investigator(s): Jessica Peak, Justine Cooper Section, Township, Range: _____

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): C Lat: 34.44348377 Long: -119.78512896 Datum: _____

Soil Map Unit Name: EaB - Elder sandy loam NWI classification: None

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? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: One parameter ("County") wetland; delineated by drift deposits.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
Sapling/Shrub Stratum (Plot size: 20 ft radius)				
1. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of : _____ Multiply by: OBL species _____ x1 = _____ FACW species _____ x2 = _____ FAC species _____ x3 = _____ FACU species _____ x4 = _____ UPL species _____ x5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = <u>4.5</u>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
Herb Stratum (Plot size: 20 ft radius)				
1. <u>Plantago lanceolata</u>	<u>60</u>	<u>yes</u>	<u>FAC</u>	
2. <u>Hordeum murinum</u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	
3. <u>Bromus hordeaceus</u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	
4. <u>Bromus diandrus</u>	<u>20</u>	<u>yes</u>	<u>UPL</u>	
5. <u>Artemisia douglasiana</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	
6. <u>Brassica nigra</u>	<u>5</u>	<u>no</u>	<u>UPL</u>	
7. <u>Ambrosia psilostachya</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
8. <u>Rumex crispus</u>	<u>1</u>	<u>no</u>	<u>FAC</u>	
50% = _____, 20% = _____	<u>151</u>	= Total Cover		
Woody Vine Stratum (Plot size: 20 ft radius)				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u>0</u>	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Vegetation dominated by English plantain and upland annual grasses, with scattered western ragweed and patches of mugwort.				

SOILSampling Point: SP09**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-14	10YR 3/3	100	_____	_____	_____	_____	sandy loam	moderate sand content
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5) **(LRR C)**
☐ 1 cm Muck (A9) **(LRR D)**
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)

- ☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: No restrictive layer, no redox features, no hydric soil indicators.

HYDROLOGY**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- ☐ 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 Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ 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)
☐ 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): _____Water Table Present? Yes ☐ No ☒ Depth (inches): _____Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): _____**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Drift deposits evident from water/flow from storm event on March 20-22, 2018.

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