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JURISDICTIONAL DELINEATION REPORT

BOULDERS MIXED-USE PROJECT

CITY OF MENIFEE

RIVERSIDE COUNTY, CALIFORNIA

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INTRODUCTION

This Jurisdictional Delineation Report presents the results of a delineation of aquatic resources and drainage features conducted for the Boulders Mixed-Use Project (project) in Menifee, California. The City of Menifee (City) proposes the construction of a 234-unit multifamily residential development, on-site recreational features (e.g., recreation area, pool, and fitness center), leasing office/clubhouse, parking, landscaping, and ancillary features. The project also plans for 30,000 square feet of commercial uses located in a single three-story structure located along Heroes Court.

The Jurisdictional Delineation Study Area (JDSA) covered herein extends across the entire project site. The purpose of this delineation report is to determine the extent of both State of California and federal jurisdiction within the JDSA. This includes the potential jurisdiction of the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and/or the Porter-Cologne Water Quality Control Act, and the California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code. This report has been prepared to inform the environmental planning and review process. All referenced figures are included in Appendix A.

SITE DESCRIPTION AND SETTING

The JDSA is located at the northeast corner of the intersection of Normandy Road and Berea Road in the City of Menifee, Riverside County, California within the United States Geological Survey (USGS) *Romoland, California* 7.5-minute series topographic quadrangle (refer to Appendix A, Figure 1). Elevations in the JDSA range from approximately 1,410 feet above mean sea level (amsl) to approximately 1,435 feet amsl. The topography within the JDSA is relatively flat (developed lands) with for boulder outcroppings located in the eastern portion of the study area. The JDSA is undeveloped and is bordered to the north by a concrete-lined storm water channel and residential development. There are no prominent natural areas within or adjacent to the JDSA.

The JDSA is located within the Menifee Valley Watershed, which is approximately 27.8 square miles extending westerly from its terminus at Canyon Lake to upstream portions of Salt Creek in Menifee. All surface waters within the JDSA are ultimately conveyed to Salt Creek via an extensive, artificially constructed, storm water drainage system. The Salt Creek channel discharges from Menifee into the East Bay section of Canyon Lake. Salt Creek is one of the primary tributaries to Canyon Lake, which continues as the San Jacinto River downstream of Canyon Lake.

Based on a review of historic aerial photographs of the project area extending back to the late 1960s (NETR 2021), there do not appear to have been any natural waterbodies or associated riparian/ wetland habitat occurring within the JDSA that were displaced by subsequent development of the area. This includes the areas where existing storm water drainage channels occur within the JDSA. Therefore, all existing drainage channels in the JDSA were excavated on dry land for storm water drainage and flood control purposes.

The climate is classified as Mediterranean (i.e., arid climate with hot, dry summers and mild, wet winters). The average annual precipitation is approximately 11.11 inches. Although most of the precipitation occurs from November through May, thunderstorms may occur at other times of the year and can result in high levels of precipitation. Temperatures typically range between 36 and 98 degrees Fahrenheit (°F).

REGULATORY BACKGROUND

UNITED STATES ARMY CORPS OF ENGINEERS

The USACE regulates discharges of dredged or fill material into waters of the United States (WOTUS). These waters include wetland and nonwetland bodies of water that meet specific criteria. USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the waterbody in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations).

For several decades, the operable definition of WOTUS was provided at 33 Code of Federal Regulations (CFR) 328.3, but implementation of this definition has been shaped by the courts and subsequent guidance over the years, most substantially by the 2001 Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, No. 99-1178 (SWANCC) and the 2006 Supreme Court decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208), collectively referred to as *Rapanos*. The Supreme Court concluded that wetlands are "waters of the United States" if they significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as navigable.

Based, in part, on the *Rapanos* decision, a new rule defining WOTUS was promulgated in the *Federal Register* on June 29, 2015. Following a series of legal challenges and the former presidential administration's attempt to delay the implementation of this rule, on August 16, 2018, the United States District Court for the District of South Carolina enjoined the delay of the WOTUS Rule implementation for failure to comply with the Administrative Procedure Act. This decision made the 2015 WOTUS definition effective in 26 states where federal district court judges did not stay it, including California.

However, pursuant to an Executive Order signed on February 28, 2017, "Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the `Waters of the United States Rule,'" the USACE and United States Environmental Protection Agency (EPA) embarked on a two-step process to revise the definition of "waters of the United States." The first step was to repeal the 2015 WOTUS definition and revert to the operative definition that was shaped by previous regulations and subsequent court decisions. The *Federal Register* notice that effected this repeal was published on October 22, 2019, with an effective date of December 23, 2019. On February 14, 2019, as the second step of the comprehensive two-step process, the USACE and the EPA proposed to interpret the term "waters of the United States" to encompass traditional navigable waters, including the territorial seas; tributaries that contribute perennial or intermittent flow to such waters; certain ditches; certain lakes and ponds; impoundments of otherwise jurisdictional waters; and wetlands adjacent to other jurisdictional waters. The public comment period for the proposed revised definition of "waters of the United States" closed on April 15, 2019, and the agencies reviewed and considered approximately 620,000 comments they received.

The final Navigable Waters Protection Rule was published in the *Federal Register* on April 21, 2020 (EPA and USACE 2020), and became effective on June 22, 2020. The final definition clarifies that WOTUS do not include the following:

- Ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- Diffuse storm water runoff and directional sheet flow over upland;
- Ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to limitations;
- Prior converted cropland;
- Artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- Artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;
- Storm water control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store storm water runoff;
- Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- Waste treatment systems.

Given the substantial changes in operable definitions that have occurred and may continue considering the regulatory revisions and potential court actions, it is not possible to predict the regulations that will be in place at the time of a particular jurisdictional determination by the USACE. Therefore, this jurisdictional delineation focuses on identifying the boundaries of potentially jurisdictional waterbodies, using methods for determining the locations of ordinary high water marks (OHWMs) and wetland boundaries as described below. These methods for determining the boundaries of waterbodies in general have not substantially changed over the years and are not likely to change with any revised regulations. This delineation can then be used in combination with a companion jurisdictional analysis to determine which of the identified waterbodies are actually jurisdictional, based on the definition that is in effect at the time of a jurisdictional determination by the USACE. In some cases, it may be possible to identify waterbodies that are likely or unlikely to be jurisdictional under any scenario (i.e., based on previous regulations and *Rapanos* guidance) or on regulations that have been adopted and are to become effective in the future.

Any definition is likely to include the following categories of waters:

(i) The territorial seas and all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(ii) Tributaries of waters identified in paragraph (i) above; however, the definition of tributary, based on the nature and amount of flow, is subject to change if regulations are revised;[1]

(iii) Certain lakes, ponds, and impoundments of waters otherwise identified as waters of the United States;

(iv) Wetlands adjacent to any of the above that have a direct hydrologic surface connection in a typical year.

Similarly, certain waterbodies are likely to be excluded, pursuant to one of the following: (1) the current specific rule; (2) the preamble to the 1986 regulations; (3) the SWANCC decision; or (4) *Rapanos* guidance; examples include:

(i) Isolated waters;

(ii) Artificial, ephemeral ditches, excavated on dry land and draining only uplands;

(iii) Erosional features that do not meet the definition of tributary;

(iv) Storm water control features created in dry land;

(v) Artificial reflecting pools or swimming pools and ornamental waters;

(vi) Incidental depressions created in dry land.

As applicable, waters in the above categories are noted in this delineation; the relationships of waters in other categories to likely jurisdictional waters are also noted, but without speculation as to their future jurisdictional status.

The USACE typically considers any body of water displaying an OHWM for designation as WOTUS, subject to the applicable definition of WOTUS. USACE jurisdiction over nontidal WOTUS extends laterally to the OHWM or beyond the OHWM to the limit of any contiguous wetlands, if present.

The OHWM is defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). Jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

Waters found to be isolated and not subject to CWA regulation may still be regulated by the RWQCB under the State Porter-Cologne Water Quality Control Act.

[1] According to the Navigable Waters Protection Rule, effective June 22, 2020, ephemeral features (e.g., features that contain/convey surface storm water in direct response to precipitation with surface water present/flowing only during and shortly after rainfall) are not considered WOTUS.

Wetland Waters of the United States

Wetland delineations for Section 404 purposes must be conducted according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (*Regional Supplement*) (USACE 2008) and the *Corps of Engineers 1987 Wetland Delineation Manual* (*1987 Manual*) (USACE 1987). Where there are differences between the two documents, the *Regional Supplement* takes precedence over the *1987 Manual*.

The USACE and the EPA define wetlands 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 to life in saturated soil conditions.

To be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied for that particular wetland characteristic to be met. Several indicators may be analyzed to determine whether the criteria are satisfied.

Hydrophytic vegetation and hydric soil indicators provide evidence that episodes of inundation have lasted more than a few days or have occurred repeatedly over a period of years, but do not confirm that an episode has occurred recently. Conversely, wetland hydrology indicators provide evidence that an episode of inundation or soil saturation occurred recently, but do not provide evidence that episodes lasted more than a few days or occurred repeatedly over a period of years. Because of this, if an area lacks one of the three characteristics under normal circumstances, the area is considered nonwetland under most circumstances.

Determination of wetland limits may be obfuscated by a variety of natural environmental factors or human activities, collectively called difficult wetland situations, including cyclic periods of drought and flooding, highly ephemeral stream systems, or in areas recently altered by anthropogenic activities. During periods of drought, for example, bank return flows are reduced and water tables are lowered. This results in a corresponding lowering of ordinary high water and invasion of upland plant species into wetland areas.

Conversely, extreme flooding may create physical evidence of high water well above what might be considered ordinary and may allow the temporary invasion of hydrophytic species into nonwetland areas. In highly ephemeral systems typical of Southern California, these problems are encountered frequently. In these situations, professional judgment based on years of practical experience and extensive knowledge of local ecological conditions comes into play in delineating wetlands. The *Regional Supplement* provides additional guidance for difficult wetland situations.

Hydrophytic Vegetation

Hydrophytic vegetation is plant life that grows and is typically adapted for life in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, herb, and woody vine layers) are considered

hydrophytic. Hydrophytic species are those included on the National Wetland Plant List published by the USACE (2018). Each species on the list is rated according to a wetland indicator category, as shown in Table A.

Table A: Hydrophytic Vegetation Ratings

Category	Rating	Probability
Obligate Wetland	OBL	Almost always occur in wetlands (estimated probability > 99 percent)
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability 67–99 percent)
Facultative	FAC	Equally likely to occur in wetlands and nonwetlands (estimated probability 34–66 percent)
Facultative Upland	FACU	Usually occur in nonwetlands (estimated probability 67–99 percent)
Obligate Upland	UPL	Almost always occur in nonwetlands (estimated probability > 99 percent)

Source: United States Army Corps of Engineers (2008).

To be considered hydrophytic, the species must have wetland indicator status (i.e., be rated Obligate Wetland [OBL], Facultative Wetland [FACW], or Facultative [FAC]).

The delineation of hydrophytic vegetation is typically based on the most dominant species from each vegetative stratum (strata are considered separately); when more than 50 percent of these dominant species are hydrophytic (i.e., FAC, FACW, or OBL), the vegetation is considered hydrophytic. In particular, the USACE recommends the use of the "50/20" rule (also known as the dominance test) from the *Regional Supplement* for determining dominant species. Under this method, dominant species are the most abundant species that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species comprising 20 percent or more of the total dominance measure for the stratum. In cases where indicators of hydric soil and wetland hydrology are present but the vegetation initially fails the dominance test, the prevalence index must be used. The prevalence index is a weighted average of all plant species within a sampling point. The prevalence index is particularly useful when communities only have one or two dominants, where species are present at roughly equal coverage, or when strata differ greatly in total plant cover. In addition, USACE guidance provides that morphological adaptations may be considered when determining hydrophytic vegetation when indicators of hydric soil and wetland hydrology are present (USACE 2008). If the plant community passes either the dominance test or prevalence index after reconsidering the indicator status of any plant species that exhibits morphological adaptations for life in wetlands, then the vegetation is considered hydrophytic.

Hydric Soils

Hydric soils[1] 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.[2] Soils are

[1] The hydric soils definition and criteria included in the *1987 Manual* are obsolete. Users of the *1987 Manual* are directed to the United States Department of Agriculture's Natural Resources Conservation Service website for the most current information on hydric soils.

[2] Current definition as of 1994 (*Federal Register,* July 13, 1994).

considered likely to meet the definition of a hydric soil when they meet one or more of the following criteria:

- All Histels except Folistels and Histosols except Folists;
- Soils that are frequently ponded for a long duration or very long duration[1] during the growing season; and/or
- Soils that are frequently flooded for a long duration or very long duration during the growing season.

Hydric soils develop under conditions of saturation and inundation combined with microbial activity in the soil that causes a depletion of oxygen. Although saturation may occur at any time of year, microbial activity is limited to the growing season, when soil temperature is above biologic zero (the soil temperature at a depth of 50 centimeters [19.7 inches], below which the growth and function of locally adapted plants are negligible). Biogeochemical processes that occur under anaerobic conditions during the growing season result in the distinctive morphologic characteristics of hydric soils. Based on these criteria and on information gathered from the National Soil Information System (NASIS) database, the United States Department of Agriculture's Natural Resources Conservation Service (NRCS) created a Soil Data Access Hydric Soils List that is updated annually.

The *Regional Supplement* has a number of field indicators that may be used to identify hydric soils. The NRCS (USDA 2016) has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation, accumulation of organic matter, and the reduction, translocation and/or accumulation of iron and other reducible elements. These processes result in soil characteristics that persist during both wet and dry periods. Separate indicators have been developed for sandy soils and for loamy and clayey soils.

Wetland Hydrology

Under natural conditions, development of hydrophytic vegetation and hydric soils is dependent on a third characteristic: wetland hydrology. Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (USACE 1987). The wetland hydrology criterion is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season in most years (USACE 2008).

Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. Some of the indicators commonly used to identify wetland hydrology include visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels (rhizospheres) resulting from prolonged anaerobic conditions.

[1] "Long duration" is defined as a single event ranging from 7 to 30 days; "very long duration" is defined as a single event that lasts longer than 30 days.

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The CDFW, through provisions of the California Fish and Game Code (Section 1600 et seq.), is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least a periodic or intermittent flow of water. The CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by the CDFW.

In obtaining CDFW agreements, the limits of wetlands are not typically determined. This is because the CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, mule fat, and other vegetation typically associated with the banks of a stream or lake shorelines and may not be consistent with USACE definitions. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas and may include additional areas that do not meet USACE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream, away from frequently saturated soils).

REGIONAL WATER QUALITY CONTROL BOARD

The Porter-Cologne Water Quality Control Act of the California Water Code (Section 13000 et seq.) established nine RWQCBs to oversee water quality on a day-to-day basis at the local and/or regional level. Their duties include preparing and updating water quality control plans and associated requirements, and issuing water quality certifications under Section 401 of the CWA. The CWA grants ultimate authority to the State Water Resources Control Board (SWRCB) over State water rights and water quality policy. Under the Porter-Cologne Water Quality Control Act, the RWQCBs (or the SWRCB for projects that cross multiple RWQCB jurisdictions) are responsible for issuing National Pollutant Discharge Elimination System (NPDES) permits for point-source discharges and waste discharge requirements for nonpoint-source discharges into jurisdictional waters of the State (WOTS).

The definition of waters under the jurisdiction of the State is broad and includes any surface water or groundwater, including saline waters within the boundaries of the State. Waters that meet the definition of WOTUS are also considered WOTS, but the jurisdictional limits of WOTS may extend beyond the limits of WOTUS. Isolated waters that may not be subject to regulations under federal law are considered to be WOTS and regulated accordingly.

While there is no formal statewide guidance for the delineation of nonwetland WOTS, jurisdiction generally corresponds to the surface area of aquatic features that are at least seasonally inundated, and all areas within the banks of defined rivers, streams, washes, and channels, including associated riparian vegetation. Currently, each RWQCB reserves the right to establish criteria for the regulation of nonwetland WOTS.

Wetland Waters of the State

On August 28, 2019, the California Office of Administrative Law approved the SWRCB-proposed *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (*Procedures*). The *Procedures*, effective on May 28, 2020, apply to discharges of dredged or fill material to WOTS. The *Procedures* consist of four major elements: (1) a wetland definition; (2) a framework for determining whether a feature that meets the wetland definition is a water of the State; (3) wetland delineation procedures; and (4) procedures for the submission, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

The SWRCB and RWQCBs define a wetland as:

> An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The RWQCB will rely on the final aquatic resource report verified by the USACE for determining the extent of wetland WOTUS. However, if it is not delineated in a final aquatic report, the procedures will use the USACE *1987 Manual* and the *Regional Supplement* to determine whether the area meets the State definition of a wetland. As described in the *1987 Manual* and the *Regional Supplement*, an area "lacks vegetation" if it has less than 5 percent areal coverage of plants at the peak of the growing season. The methods shall be modified only to allow for the fact that the lack of vegetation does not prevent the determination of such an area that meets the State definition of wetland.

METHODOLOGY

Prior to conducting delineation fieldwork, the following literature and materials were reviewed:

- Historic and current aerial photographic imagery (NETR 2021);
- Historic and current USGS topographic maps (USGS 2021);
- United States Fish and Wildlife Service National Wetlands Inventory (NWI) wetland mapper (USFWS 2021); and
- Natural Resource Conservation Service Web Soil Survey (USDA 2019).

LSA Senior Biologist Stan Spencer conducted the fieldwork for a jurisdictional delineation on June 15, 2021. The JDSA was visually surveyed via a combination of vehicle and, when possible, on foot. All drainage features within the JDSA were evaluated according to the most current federal and/or State regulatory criteria and guidance and mapped using aerial photographs. This included the State wetland definition and delineation procedures recently enacted by the SWRCB, and the new USACE regulations pertaining to jurisdictional WOTUS. In addition, the general conditions and characteristics associated with each drainage feature were noted and photographed.

Under the new USACE definition of WOTUS, a potential jurisdictional drainage feature must be determined to be ephemeral, intermittent, or perennial. Intermittent and perennial drainages that are tributary to traditional navigable waters are considered jurisdictional WOTUS, whereas ephemeral drainages would no longer be considered jurisdictional WOTUS. This analysis can be accomplished using a variety of hydrology data (e.g., stream gauge data) or the quantitative approach of applying the New Mexico Streamflow-Duration Assessment Method (NM SDAM) (Mazor et al. 2019). The NM SDAM is a quantitative rating (or scoring) of specific hydrologic, biological, and/or geomorphological indicators of flow duration associated with the subject drainages based on observations made in the field. The total score for each drainage is compared to a predetermined scoring range for ephemeral, intermittent, and perennial drainage features (Table 2 of the NM SDAM [Mazor et al. 2019]).

The boundaries of drainage features observed within the JDSA during the fieldwork were mapped on a recent, high-resolution aerial photograph (on a scale of 1 inch = approximately 100 feet) showing the JDSA. The widths and lengths of these drainage features that were mapped during the course of the field investigation were determined by a combination of direct measurements taken in the field and measurements taken from the aerial photographs. Features within the JDSA that are categorically excluded from federal and/or State jurisdiction under current regulatory definitions and guidance were evaluated and mapped as “non-jurisdictional features.” Since none of the drainage features in the JDSA exhibited characteristics indicative of wetlands (e.g., areas dominated by hydrophytic vegetation or hydric soils), wetland delineation procedures described in the *Regional Supplement* and those recently enacted by the SWRCB were not implemented.

RESULTS

The JDSA does not contain any NWI surface waters or wetlands based on the query conducted (Figure 4).

The soils mapped on the site include Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded, Domino silt loam, saline-alkali, Greenfield sandy loam, 8 to 15 percent slopes, eroded, Monserate sandy loam, 0 to 5 percent slopes, and Vista coarse sandy loam, 2 to 8 percent slopes (USDA 2019; Figure 5). Soil observed throughout the site appears to be consistent with this designation. None of the mapped soils are considered hydric soils and have a drainage class ranging from moderately well drained to somewhat excessively drained (Table B).

Table B: Mapped Soils Classifications

Soil	Drainage Class	Frequency of Flooding	Frequency of Ponding	Hydric Soil Rating
Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded	Somewhat excessively drained	None	None	No
Domino silt loam, saline-alkali	Moderately well drained	Rare	None	No
Greenfield sandy loam, 8 to 15 percent slopes, eroded	Well drained	None	None	No
Monserate sandy loam, 0 to 5 percent slopes	Well drained	None	None	No
Vista coarse sandy loam, 2 to 8 percent slopes	Well drained	None	None	No

Source: USDA (2019).

DESCRIPTIONS OF DELINEATED FEATURES

A brief description of each delineated feature is provided below. Figure 2 shows the locations of each drainage feature and Figure 3 provides representative photographs of each drainage feature (see Appendix A).

Drainage Feature D-1 is a trapezoidal concrete-lined drainage channel constructed for the purpose of controlling and conveying storm water runoff from the immediately surrounding area. This feature flows in an east-to-west direction carrying storm water flows and nuisance flows from nearby developed areas directly into Salt Creek to the west of the project site. The feature measured 12 feet wide and lacked any standing or flowing water at the time of the fieldwork and appears to convey only ephemeral storm water runoff. This drainage feature lacked an accumulation of soils or dead vegetative material from adjacent vegetation and there was no vegetation growing in the drainage feature. Based on a review of historic aerial imagery, Drainage D-1 was built in an upland area between 1978 and 1996 to accommodate urban runoff associated with the adjacent residential development.

A metal culvert is located just outside the JDSA on the southwestern corner of the JDSA just east of Berea Road. The area around the culvert showed no sign of flow during the site visit or in historical

aerial imagery, lacked riparian habitat and aquatic resources, and is located in uplands. Vegetation in the area surrounding the culvert consisted of upland plants similar to surrounding areas.

Isolated, low-lying areas were observed in the eastern portion of the project site and, after further determination, are being classified as road ruts. Water was observed pooling in these areas, which resulted from the removal of large boulders and continued vehicular use along dirt access roads present, as observed on 2011 historic aerial imagery, which created up to two-foot deep depressions. A 16-inch-deep soil pit was excavated at the two most prominent road rut features because of the prevalence of wetland vegetation and presumed wetland hydrology. Prominent redox features or other indicators of hydric soils were not detected (refer to Wetland Data Form SP1 [Sampling Point 1] in Appendix B). Therefore, given the presence of indicators that wetland vegetation and wetland hydrology exist, wetland soils were found to be absent, and the road ruts would not be considered to be wetlands.

JURISDICTIONAL CONCLUSIONS

One distinct drainage feature (D-1) was identified within the JDSA (refer to Figure 2) and, in this case, was determined to be jurisdictional. All remaining features identified on site, including a metal culvert and road ruts were all determined to be non-jurisdictional. The regulatory basis for whether a particular waterbody (or feature) is jurisdictional or non-jurisdictional is described below under the applicable regulatory agency.

United States Army Corps of Engineers

D-1 is an artificially constructed, concrete-lined storm water control feature designed to collect and convey storm water and other urban runoff out of the immediate residential areas and into Salt Creek. The metal culvert is an artificially constructed storm water control feature designed to collect and convey storm water off the project site and areas west of Berea Road. Under the current definition of WOTUS (EPA and USACE 2020), WOTUS do not include storm water control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store storm water runoff. In addition, Drainage D-1 and the metal culvert are ephemeral and also constructed or excavated in uplands and, as such, do not correspond to previously existing natural waterbodies or wetlands.

Road ruts present on site were inadvertently created due to vehicular travel and the removal of large boulders. The road ruts are isolated, ephemeral features that do not convey flows off site or connect to features that convey flows off site. Under the current definition of WOTUS (EPA and USACE 2020), WOTUS do not include ephemeral features including ephemeral streams, swales, gullies, rills, and pools.

Furthermore, none of these features supports jurisdictional wetlands. Therefore, based on current regulations, these features are categorically excluded from federal jurisdiction and do not meet the criteria for WOTUS pursuant to the Navigable Waters Protection Rule.

California Department of Fish and Wildlife

In accordance with Section 1602 of the California Fish and Game Code, CDFW asserts jurisdiction over rivers, streams, and lakes. There are no "rivers" or "lakes" within or adjacent to the JDSA. The features within the JDSA are concrete-lined, lack bed and bank, and lack associated riparian habitat. Although these features appear to convey flows periodically during or for a short period following a storm event, they do not provide associated aquatic resource values for fish and wildlife species. Therefore, based on the conditions of the features as well as their lack of aquatic functions and values, these features are not considered to be "streams" or "lakes" subject to CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code.

Regional Water Quality Control Board

Since these features are currently excluded from federal jurisdiction subject to Section 404 of the CWA and thus do not meet the definitions of WOTUS pursuant to the Navigable Waters Protection Rule, these drainage features would likewise not be considered WOTS subject to Section 401 of the CWA. Furthermore, no wetlands according to the State's new wetlands definition and procedures (SWRCB 2019) were identified in any of the features. In addition, since these features are not considered jurisdictional streams and lack associated riparian habitat subject to CDFW jurisdiction, it is expected that the RWQCB would not assert jurisdiction over these drainage features pursuant to the Porter-Cologne Water Quality Control Act, with the exception of D-1.

D-1 is considered jurisdictional under the Porter-Cologne Water Quality Control Act as it conveys ephemeral surface flows directly into Salt Spring Creek. This equates to approximately 0.009 acre of non-wetland WOTS within the JDSA.

DISCLAIMER

The findings and conclusions presented in this report, including the locations and extents of features subject to regulatory jurisdiction (or lack thereof), represent the professional opinion of the consultant biologists. These findings and conclusions should be considered preliminary until verified by the appropriate regulatory agencies.

REFERENCES

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, Editors. 2012. *The Jepson Manual: Vascular Plants of California,* second edition. University of California Press, Berkeley, CA.

California Department of Fish and Wildlife (CDFW). ESRI. V5.28.08. California Streams. Biogeographic Information and Observation System (BIOS). Website: https://apps.wildlife.ca.gov/bios/.

Federal Interagency Committee for Wetland Delineation. 1989. *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*. United States Army Corps of Engineers, United States Environmental Protection Agency, United States Fish and Wildlife Service, and United States Department of Agriculture Soil Conservation Service, Washington, DC. Cooperative technical publication. 76 pp., plus appendices.

Mazor, R.D., B. Topping, R. Kwok, T. Nadeau, R. Leidy, K. Fritz, R. Harrington, J. Kelso, A. Allen, J. Robb, G. David, S. Jensen. 2019. Validation of two streamflow-duration assessment methods (SDAMs) in the Arid Southwest of the United States. Southern California Coastal Water Research Project, Technical Report No. 1100.

Munsell Color. 2000 (rev. ed.). *Munsell Soil Color Charts*. Macbeth Division of Kollmorgen Instruments Corporation, New Windsor, NY.

Nationwide Environmental Title Research, LLC (NETR). 2021. Historic Aerials by NETRonline (v.0.5.41). Website: https://historicaerials.com (accessed September 2, 2021).

Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and Soil Survey Staff. 2012. *Field Book for Describing and Sampling Soils*, Version 3.0. Natural Resources Conservation Service, National Soil Survey Center, Lincoln, Nebraska.

State Water Resources Control Board. (SWRCB). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State [For Inclusion in the Water Quality Control Plans for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California]. April.

United States Army Corps of Engineers (USACE). 2018. National Wetland Plant List, version 3.4 (Arid West Region). Hanover, New Hampshire: Engineer Research and Development Center Cold Regions Research and Engineering Laboratory. Website: http://wetland-plants.usace.army.mil/.

_____. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, eds., J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: United States Army Engineer Research and Development Center.

_____. 2007. *CECW-OR Memorandum: Clean Water Act Jurisdiction Following the United States Supreme Court's Decision in* Rapanos v. United States *&* Carabell v. United States*.*

_____. 1992. CECW-OR Memorandum: Clarification and Interpretation of the *1987 Manual*.

_____. 1991. CECW-OR Memorandum: Questions and Answers on the *1987 Manual*.

_____. 1987. Environmental Laboratory. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. United States Army Engineer Waterways Experiment Station, Vicksburg, MS.

United States Department of Agriculture (USDA). 2016. Natural Resources Conservation Service. *Field Indicators of Hydric Soils in the United States*, Version 8.0. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for hydric soils.

_____. 2019. Web Soil Survey. Website: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx (accessed September 2021).

United States Environmental Protection Agency (EPA) and USACE. 2020. The Navigable Waters Protection Rule: Definition of ''Waters of the United States.'' Final Rule. *Federal Register*, Vol. 85, No. 77, April 21, 2020.

United States Fish and Wildlife Service (USFWS). 2021. Wetlands Mapper. Website: https://www.fws.gov/wetlands/data/mapper.html (accessed September 2021).

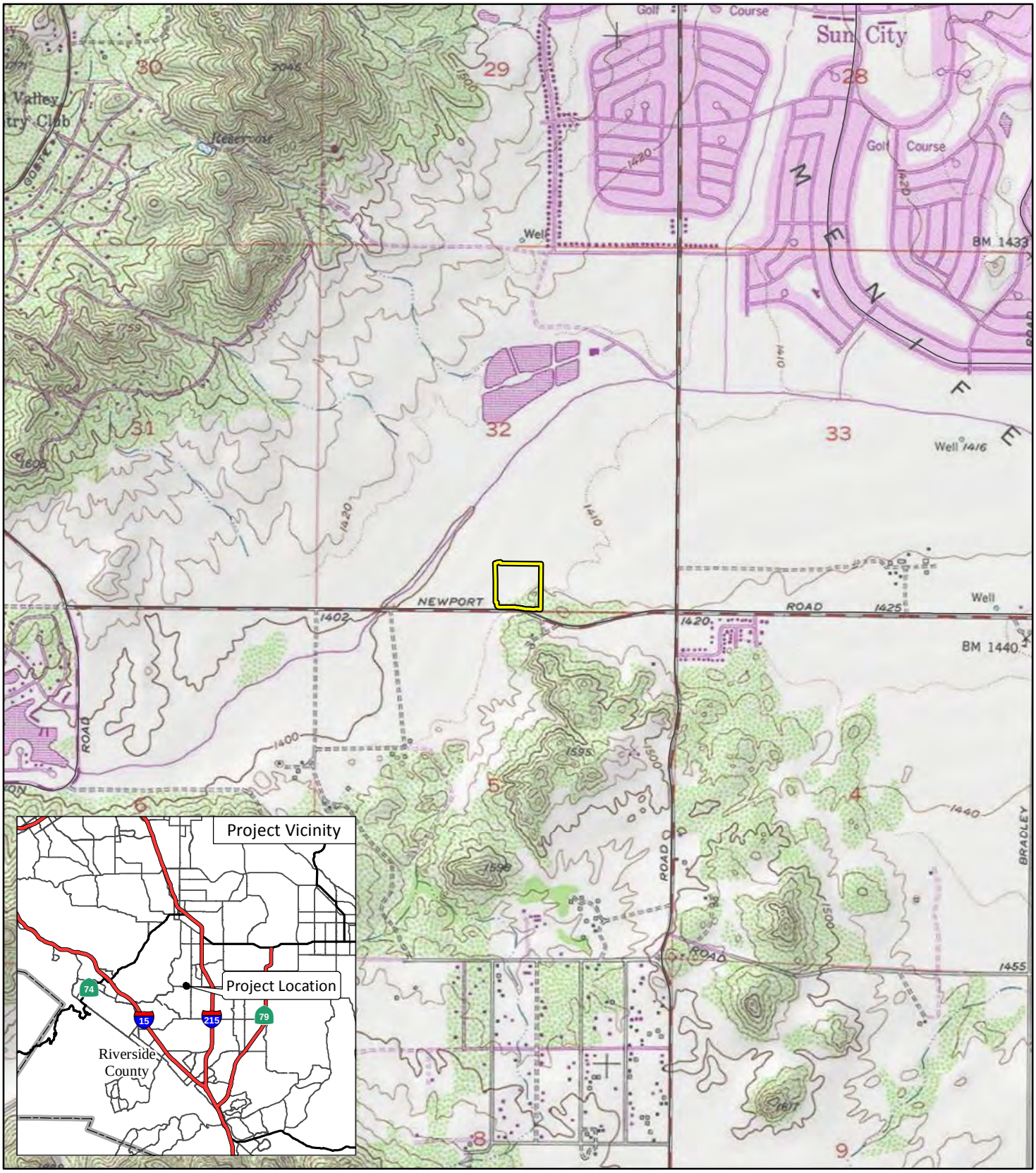
United States Geological Survey. 2021. topoView. Records of the USGS *Romoland* 7.5-minute quadrangle maps from 1953, 2012, 2015 and 2018. Website: https://ngmdb.usgs.gov/topoview/viewer/ (accessed September 2021).

Wetland Research and Technology Center. 1993. *Draft Training Package, Wetland Delineator Certification Program*. Vicksburg, Mississippi: Environmental Laboratory, EP-W.

APPENDIX A

FIGURES

Figure 1: Project Location and Vicinity
Figure 2: Jurisdictional Delineation Map
Figure 3: Representative Site Photographs
Figure 4: National Wetland Inventory
Figure 5: Soils



LSA

LEGEND

FIGURE 1

0 1000 2000
FEET

SOURCE: USGS 7.5' Quad - *Romoland* (1979), CA

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Boulders Mixed-Use Project

Project Location and Vicinity

LSA

LEGEND

- Project Location
- Off-Site Work Area
- Soil Pit
- Photograph Location
- Non-Jurisdictional (USACE/RWQCB/CDFW)
- Road Ruts
- Culvert
- Nonwetland Waters of the State
- Drainage D-1 (0.009 ac)

N

0 50 100
FEET

SOURCE: Google (2020)

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FIGURE 2

Boulders Mixed-Use Project

Jurisdictional Delineation Map

Photo 1. View of Drainage D-1, facing east.

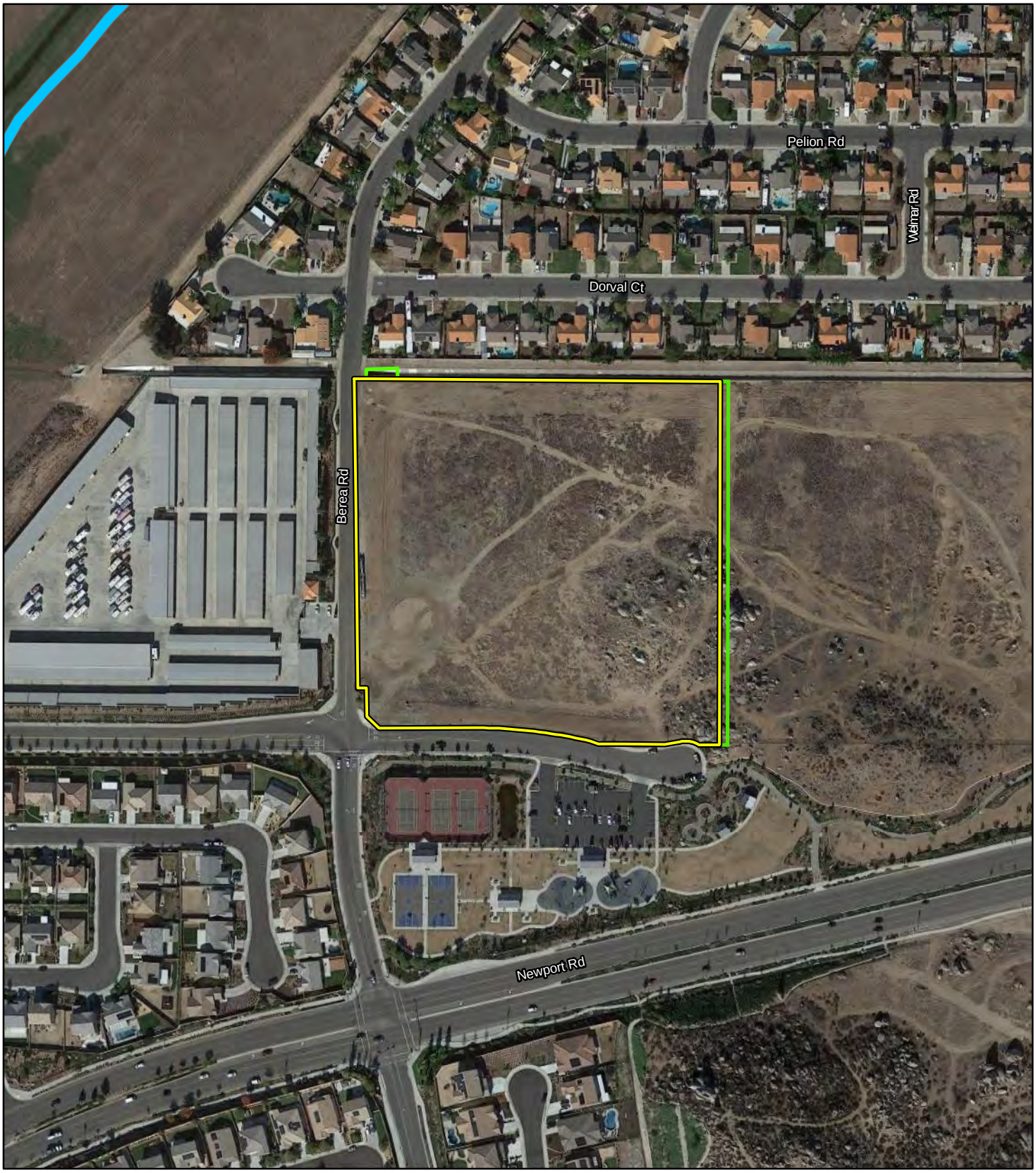
Photo 2. View of area surrounding the metal culvert, facing east.

Photo 3. View of road ruts, facing northeast.

LSA

FIGURE 3

Boulders Mixed-Use Project
Site Photographs



LSA

FIGURE 4

LEGEND

Study Area

Off-Site Work Area

National Wetland Inventory (NWI)

Freshwater Emergent Wetland

0 125 250

FEET

SOURCE: Google (2020); NWI (20120

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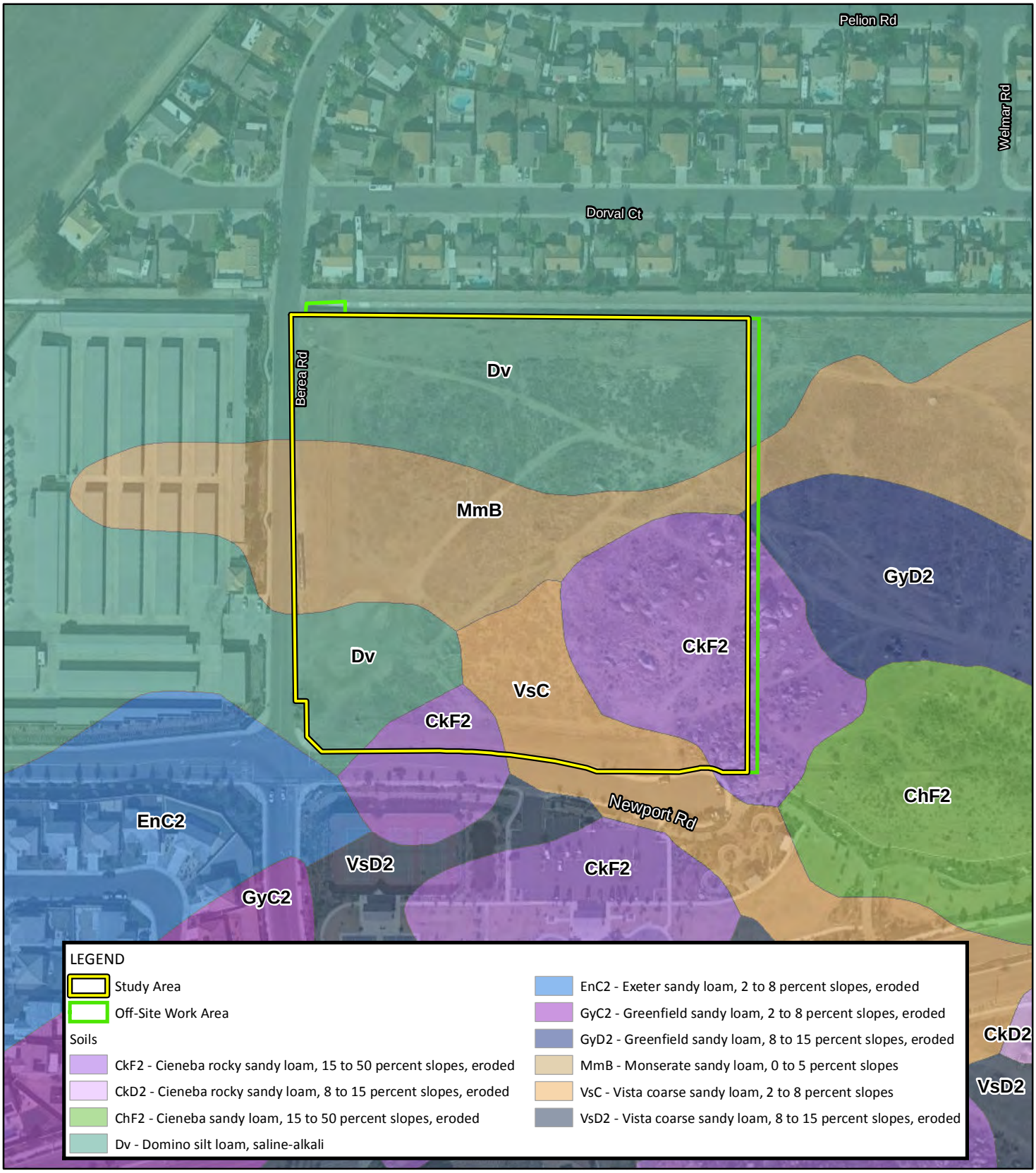
Boulders Mixed-Use Project

National Wetland Inventory



LSA

FIGURE 5

N

0 100 200
FEET

Boulders Mixed-Use Project

Soils

SOURCE: Google (2020); SSURGO (2019)

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APPENDIX B

WETLAND DATA SHEETS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Boulders Mixed-Use (TDM2101) City/County: Menifee/Riverisde Sampling Date: 4/21/2021
Applicant/Owner: State: CA Sampling Point: 1
Investigator(s): Stan Spencer, Ryan Villanueva Section, Township, Range:
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): LRR C Lat: 33.68634192 Long: -117.21256723 Datum: WGS 1984
Soil Map Unit Name: Monserate sandy loam, 0 to 5 percent slopes (MmB) NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ___ (If no, explain in Remarks.)
Are Vegetation ___ Soil ___ or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes **x** No ___
Are Vegetation ___ Soil ___ or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10'x10')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: N/A)			
1. *Centromadia pungens*	10	Y	FAC
2. *Oncosiphon piluliferum*	15	Y	FACU
3. *Lepidium dictyotum*	10	Y	FAC
4. *Plagiobothrys leptocladus*	10	Y	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	45	= Total Cover	
Woody Vine Stratum (Plot size: N/A)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 55 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1=	10
FACW species	0	x 2=	0
FAC species	20	x 3=	60
FACU species	15	x 4=	60
UPL species	0	x 5=	0
Column Totals:	45 (A)		130 (B)

Prevalence Index = B/A = 2.888888889

Hydrophytic Vegetation Indicators:

___ 1- Rapid Test For Hydrophytic Vegetation
x 2- Dominance Test is >50%
x 3- Prevalence Index is ≤3.0[1]
___ 4- Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5- Wetland Non-Vascular Plants[1]
___ 6- Problematic Hydrophytic Vegetation[1](Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** ___

Remarks:

SOIL Sampling Point: 1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/4	100		0			sandy loam	
6-16	10YR 3/3	100		0			loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be presetn, unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- x Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery(B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- x 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 x Depth (Inches): ___

Water Table Present? Yes ___ No x Depth (Inches): ___

Saturation Present? Yes ___ No x Depth (Inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** x **No** ___

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

Remarks: Although no surface was present during the April 21, 2021 site visit, surface water to a depth of 4 inches was documented in March 2021.