Appendix C-2

Jurisdictional Delineation Report for
Cancer Center Site

JURISDICTIONAL DELINEATION REPORT

LOS ROBLES HOSPITAL AND MEDICAL CENTER – CANCER CENTER PROJECT

THOUSAND OAKS, VENTURA COUNTY, CALIFORNIA

LSA

November 2022

JURISDICTIONAL DELINEATION REPORT

LOS ROBLES HOSPITAL AND MEDICAL CENTER – CANCER CENTER PROJECT

THOUSAND OAKS, VENTURA COUNTY, CALIFORNIA

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LIST OF ABBREVIATIONS AND ACRONYMS

°F	degrees Fahrenheit
1987 Manual	*Corps of Engineers 1987 Wetland Delineation Manual*
amsl	above mean sea level
APN	Assessor's Parcel Number
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CWA	Clean Water Act
D	Drainage Feature
EPA	United States Environmental Protection Agency
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
ft	foot/feet
HUC	Hydrologic Unit Code
JDSA	jurisdictional delineation study area
NETR	National Environmental Title Research, LLC
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	Obligate Wetland
OHWM	ordinary high water mark
Procedures	*State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*
project	Los Robles Hospital and Medical Center – Cancer Center Project
Rapanos	the 2006 United States Supreme Court decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States*
Regional Supplement	Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region
RWQCB	Log Angeles Regional Water Quality Control Board
SWRCB	State Water Resources Control Board

TNW	traditionally navigable water
UPL	Obligate Upland
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTS	waters of the State
WOTUS	waters of the United States

JURISDICTIONAL DELINEATION REPORT
LOS ROBLES HOSPITAL AND MEDICAL CENTER – CANCER CENTER PROJECT

INTRODUCTION

This Jurisdictional Delineation Report presents the results of a delineation of aquatic resources and drainage features conducted for the Los Robles Hospital and Medical Center – Cancer Center Project (project) in Thousand Oaks, California. The proposed project would result in the construction of a medical center with associated asphalt-paved parking areas.

The jurisdictional delineation study area (JDSA) covered herein includes approximately 6.23 acres within Assessor's Parcel Numbers [APNs] 681-018-0265 and 681-018-0275. The JDSA consists of the project site, which consists of 4.76 acres, and an off-site area, which includes an additional 1.47 acres. The additional area is associated with the drainages located on the northeastern portion of the 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 directly southeast of the intersection of Rolling Oaks Drive and Los Padres Drive in Thousand Oaks, Ventura County, California, as depicted on the United States Geological Survey (USGS) *Thousand Oaks, California* 7.5-minute series topographic quadrangle (Figure 1). Elevations in the JDSA range from 870 feet (ft) above mean sea level (amsl) to 770 ft amsl. The topography within the JDSA is relatively flat on the western portion but includes multiple undulating foothill slopes on the eastern portion of the JDSA. The JDSA was formerly developed with the Rolling Oaks Child Development Center, of which only concrete slabs and utilities remain within the JDSA. The JDSA is bordered to the north by Rolling Oaks Drive followed by commercial development, to the east by undeveloped land followed by single-family residential development, to the south by undeveloped land, and to the west by Los Padres Drive followed by multifamily residential development. The area is surrounded by relatively developed lands, consisting of a golf course and low-density, rural residential and commercial uses. The JDSA is within the Upper Conejo Arroyo watershed (Hydrologic Unit Code [HUC] 12 180701030104), which is 43.23 square miles extending westerly from its terminus at Simi Peak, to the east of the study area, to downstream portions of South Branch Arroyo Conejo in Newbury Park, to the west of the study area. All surface waters within the JDSA are ultimately conveyed to Arroyo Conejo. Arroyo Conejo discharges into Calleguas Creek, which is a tributary to the Pacific Ocean.

Based on a review of historic aerial photographs and topographic maps extending back to the late 1930s (NETR 2022), the entirety of the project area was undeveloped until at least the early 1980s,

when it was developed with the Rolling Oaks Child Development Center, which was razed (with the exception of multiple concrete slabs) prior to 2020.

The climate is classified as Mediterranean (i.e., arid climate with hot, dry summers and mild, wet winters). The average annual precipitation is 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 degrees Fahrenheit (°F) and 98°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 non-wetland bodies of water that meet specific criteria. USACE regulatory jurisdiction pursuant to Section 404 of the federal 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 traditionally navigable waters [TNWs] 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 United States Supreme Court decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, No. 99-1178, 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. However, the involved Supreme Court justices were not able to agree on a single, underlying standard that would govern future jurisdictional disputes. Instead, a four-justice plurality opinion, authored by Justice Antonin Scalia, and an opinion by Justice Anthony M. Kennedy, proposed two alternative tests for evaluating jurisdictional waters:

1. Relative permanence and continuous surface connection.
2. **Significant Nexus:** A nexus exists when the feature (whether an adjacent wetland or tributary) significantly affects the chemical, physical, and biological integrity of other covered waters.

Following the *Rapanos* decision, the lower courts immediately struggled to determine which "test" should be used, which led to inconsistency in CWA implementation across the states. On June 5, 2007, the USACE issued guidance regarding the *Rapanos* decision. After consideration of public comments and agencies' experience, revised guidance was issued on December 2, 2008. This guidance states that the USACE will assert jurisdiction over TNWs, wetlands adjacent to TNWs, relatively permanent non-navigable tributaries that have a continuous flow at least seasonally (typically 3 months), and wetlands that directly abut relatively permanent tributaries. Under the 2008 *Rapanos* Guidance, the USACE determined that a significant nexus was required for its

jurisdiction to extend to waters that are non-navigable tributaries that are not relatively permanent waters and wetlands adjacent to non-navigable tributaries that are not relatively permanent waters. The USACE generally did not assert jurisdiction over swales or erosional features, or ditches excavated wholly in and draining only uplands that do not carry a relatively permanent flow of water. However, the USACE reserved the right to regulate these waters on a case-by-case basis.

Several recent attempts have been made to clarify the scope of WOTUS. Based, in part, on the *Rapanos* decision and the opinions authored by Justices Kennedy and Scalia, new rules defining WOTUS were promulgated under the Obama and Trump administrations. The 2015 "Clean Water Rule" and the 2020 "Navigable Waters Protection Rule" set forth different definitions for WOTUS (ranging from relatively broad federal jurisdiction under the 2015 rule to relatively limited federal jurisdiction under the 2020 rule). Each of these new rules prompted series of legal challenges and court decisions. On August 30, 2021, the United States District Court for Arizona vacated the 2020 Navigable Waters Protection Rule, which reinstated federal wetland regulations and definitions originally adopted by the federal government in the 1980s. In light of this order, the United States Environmental Protection Agency (EPA) and the USACE (collectively referred to as the "agencies") have halted implementation of the 2020 Navigable Waters Protection Rule and are interpreting WOTUS consistent with the pre-2015 regulatory regime (and 2008 *Rapanos* Guidance) until further notice.

While litigation continues, on November 18, 2021, the agencies announced plans for new WOTUS rulemaking, and the current definition of WOTUS (EPA n.d.) is as follows:

1. 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;

2. All interstate waters including interstate wetlands;

3. All other waters such as intrastate lakes, rivers, streams (including intermittent 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 including any such waters:

    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

    c. Which are used or could be used for industrial purposes by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States under this definition;

5. Tributaries of waters identified in paragraphs (1) through (4) of this section;

6. The territorial sea; and

7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this section;

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR 423.11(m) that also meet the criteria of this definition) are not WOTUS.

WOTUS do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA.

Agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The 2008 *Rapanos* Guidance and 2021 Revised Definition of "Waters of the United States" proposed rules acknowledge that certain ephemeral waters, especially in the arid West, are distinguishable from the geographic features described above where such ephemeral waters are tributaries, and they have a significant nexus to downstream traditional navigable waters. In such cases, the agencies will decide CWA jurisdiction on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable waters.

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters

- Significant nexus includes consideration of hydrologic and ecologic factors

Given the substantial changes in operable definitions that have taken place and are likely to continue considering recent regulatory revisions and court actions, it is impossible 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 the ordinary high water mark (OHWM) 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.

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 non-tidal waters of the United States extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent 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's Porter-Cologne Water Quality Control Act.

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 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 non-wetland 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 non-wetland 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 below in Table A.

Table A: Hydrophytic Vegetation Ratings

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

Source: Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008).
USACE = United States Army Corps of Engineers

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

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).

1. All Histels except Folistels and Histosols except Folists;
2. Soils that are frequently ponded for a long duration or very long duration[3] during the growing season; or
3. 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 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.

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

[3] "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.

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 non-point 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.

Although there is no formal statewide guidance for the delineation of non-wetland 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 non-wetland 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 the RWQCBs define a wetland as such:

> 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, LSA reviewed the following literature and materials:

- Historic and current aerial photographic imagery (NETR 2022)
- Historic and current USGS topographic maps (USGS 2022)
- USFWS National Wetlands Inventory (NWI) wetland mapper (USFWS 2021)
- NRCS Web Soil Survey (USDA 2019)

LSA Biologists Jeremy Rosenthal and Heather Monteleone conducted the fieldwork for a jurisdictional delineation on September 15, 2022. They visually surveyed the JDSA 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 current USACE regulations pertaining to jurisdictional WOTUS, which are consistent with the pre-2015 regulatory regime until further notice. In addition, Mr. Rosenthal and Ms. Monteleone noted and photographed the general conditions and characteristics associated with each drainage feature.

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 ft) showing the JDSA. The widths and lengths of these drainage features 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 generally excluded from federal and/or State jurisdiction under current regulatory definitions and guidance were evaluated and mapped as "non-jurisdictional features." Because 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

Database Searches

National Wetlands Inventory

Based on a review of the National Wetlands Inventory Map (USFWS 2021), a blue line riverine feature (Figure 2) is mapped within the JDSA. This blueline feature was identified during the field survey and is further discussed as Drainage Feature 2.

United States Department of Agriculture Soil Survey

The soils mapped on the site include Azule gravelly loam, 5 to 9 percent slopes, warm and Gilroy loam, 15 to 50 percent slopes, very rocky (USDA 2019) (Figure 3). Soil observed throughout the site appears to be consistent with this designation. None of the mapped soils are considered hydric soils; the soils have drainage classes 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
Azule gravelly loam, 5 to 9 percent slopes, warm	Well drained	None	None	No
Gilroy loam, 15 to 50 percent slopes, very rocky	Well drained	None	None	No

Source: Web Soil Survey (United States Department of Agriculture 2019).

Descriptions of Delineated Features

A brief description of the delineated features is provided below. Figure 4 shows the location of the drainage features, and Figure 5 provides representative photographs of the drainage features.

- **Drainage Feature 1 (D-1):** D-1 is an unnamed, earthen drainage tributary to Arroyo Conejo, which is a tributary to Conejo Creek, which is a tributary to Calleguas Creek, which in turn is a tributary to the Pacific Ocean. This drainage flows in a west-to-east direction and is fed by flows originating from a 5 ft diameter concrete box culvert on the northeastern corner of the project site. The western portion of Drainage D-1 consists of a bed and bank and OHWM indicators, including sediment deposits and a line impressed on the bank. The central portion of the drainage does not contain a bed and bank or visible OHWMs and consists of mostly sheet flow; however, this portion of D-1 is somewhat obscured due to desiccated invasive annual grass species. The eastern portion of D-1, prior to its confluence with Drainage Feature 2 (discussed below), consists of OHWM indicators, including sediment deposits, but does not consist of bed and bank characteristics indicative of an erosional rill. The drainage ranges from approximately 2 ft wide at its narrowest to approximately 25 ft wide at its widest and is 257 ft long.

- **Drainage Feature 2 (D-2):** D-2 is an unnamed, earthen drainage tributary to Arroyo Conejo. Based on a review of the National Wetlands Inventory Map (USFWS 2021), this feature is mapped as a blue line riverine feature. Drainage D-2 flows in a south-to-north direction and is fed by flows originating from a 3 ft corrugated plastic pipe-culvert. The entirety of D-2 consists of OHWM indicators throughout, including sediment deposits, drift deposits, undercutting, and a defined bed and bank along most of the drainage. This drainage ranges from approximately 2 ft wide at its narrowest to approximately 5 ft wide at its widest and is approximately 350 ft long within the JDSA.

- **Drainage Feature 3 (D-3):** D-3 is an unnamed, earthen, isolated erosional feature that is not a tributary to D-2, which is a tributary Arroyo Conejo. This drainage flows in a west-to-east direction and is fed by flows originating from stormwater on the eastern end of the project site. D-3 consists of bed and bank and OHWM indicators, including sediment deposits and a line impressed on the bank. Outside of the project site boundary, the OWHM indicators of D-3 end and the drainage becomes sheet flow. Based on field observations and current aerial imagery, the sheet flow originating from D-3 does not appear to have a nexus to D-2. This drainage ranges from 2 ft wide at its narrowest to approximately 3 ft wide at its widest and is approximately 191 ft long.

- **Drainage Feature 4 (D-4):** D-4 is an unnamed, concrete lined v-ditch that was delineated in the southern portion of the JDSA on the undeveloped hillslope. This feature lacks hydrophytic vegetation, hydric soils, and does not exhibit a clear OHWM. It conveys stormwater runoff directly into Drainage Feature 5. Within the JDSA, this drainage is approximately 2 ft wide and 220 ft long.

- **Drainage Feature 5 (D-5):** D-5 is an unnamed, concrete-lined trapezoidal ditch that was delineated within the JDSA to the west along Los Padres Drive. This feature lacks hydrophytic vegetation, hydric soils, and does not exhibit a clear OHWM. It functions as a stormwater control feature and conveys ephemeral nuisance flows (sheet flow) associated with the undeveloped hillslope on the southern portion of the JDSA and urban runoff from the surrounding single-family residential development. This drainage connects to a 3 ft concrete pipe drain inlet on its northern end near the intersection of Los Padres Drive and Rolling Oaks Drive. Within the JDSA, this drainage is approximately 5 ft wide and 240 ft long.

Jurisdictional Conclusions

Five distinct drainages (D-1 through D-5) were identified within the JDSA (refer to Figure 4) and, in this case, D-1 and D-2 were determined to be jurisdictional drainages. D-3, D-4, and D-5 were determined to be non-jurisdictional drainages. The regulatory basis for whether a particular waterbody (or feature) is jurisdictional or non-jurisdictional is described below under the applicable regulatory agency. Table C details potential jurisdictional areas by drainage number and associated acreages.

Table C: Potential Jurisdictional Areas by Drainage Number

Feature	RWQCB Jurisdiction[1] (acres)	CDFW Jurisdiction (acres)	USACE Jurisdiction (acres)
Drainage 1	0.036	0.110	0.036
Drainage 2	0.019	0.019	0.019
Drainage 3	(Non-jurisdictional)	(Non-jurisdictional)	(Non-jurisdictional)
Drainage 4	(Non-jurisdictional)	(Non-jurisdictional)	(Non-jurisdictional)
Drainage 5	(Non-jurisdictional)	(Non-jurisdictional)	(Non-jurisdictional)
Total Jurisdictional Acres	**0.055**	**0.129**	**0.055**

Source: Compiled by LSA (2022).
Note: Totals are subject to rounding.
[1] All RWQCB jurisdictional areas are non-wetland waters of the State.
CDFW = California Department of Fish and Wildlife
RWQCB = Regional Water Quality Control Board
USACE = United States Army Corps of Engineers

United States Army Corps of Engineers Jurisdiction

Jurisdictional 404 Waters of the United States

Based on the results of the jurisdictional delineation, Drainage D-1 is tributary to Arroyo Conejo, which is a tributary to Conejo Creek, which is a tributary to Calleguas Creek, which in turn is a tributary to the Pacific Ocean, which is a TNW. D-1 exhibits OHWM indicators, which included a bed, banks, and sediment deposits. Further, D-1 appears to have a significant nexus to the Pacific Ocean because it contributes to the biological, chemical, and physical integrity of a TNW. This drainage is vegetated throughout, which consisted of native and non-native upland species on the western portion and primarily non-native grasses on the eastern portion. Although D-1 would satisfy the wetland hydrology, this feature failed to meet the vegetation and soils criteria for wetlands. D-1 is a tributary to D-2 within the JDSA; Drainage D-2 consists of ephemeral flows and exhibits OHWM indicators similar to D-1. Therefore, Drainages D-1 and D-2 are potentially considered non-wetland WOTUS under current regulatory definitions. These drainages comprise 0.055 acre of potential non-wetland WOTUS within the JDSA.

Non-Jurisdictional Features

Drainage D-3 is an isolated feature and does not show a direct connection to Drainages D-1 or D-2. Drainages D-4 and D-5 and their associated pipe culvert inlet structure were created on dry land for the sole purpose of conveying stormwater runoff. The USACE does not generally assert jurisdiction over isolated features that do not provide a direct connection to other WOTUS or man-made drainages that did not displace a previously existing natural drainage channel and are wholly in and draining only uplands that do not convey at least a relatively permanent flow of water. Therefore, these drainages are not considered WOTUS.

California Department of Fish and Wildlife Jurisdiction

Jurisdictional 1602 Streambeds and Associated Riparian Habitat

In accordance with Section 1602 of the California Fish and Game Code, the CDFW asserts jurisdiction over rivers, streams, and lakes, as well as any riparian vegetation associated with those features.

There are no "rivers" within or adjacent to the JDSA; however, two ephemeral drainages (i.e., D-1 and D-2) are present, as shown on Figure 4. Within Drainage D-1, two Facultative Upland (FACU) oaks species overhang the drainage, including coast live oak (*Quercus agrifolia*) and valley oak (*Quercus lobata*) along with multiple species of eucalyptus (*Eucalyptus* sp.). These species contribute a positive biological and physical contribution to this drainage. Therefore, CDFW jurisdiction includes the drip-line extent of the canopy associated with the aforementioned tree species, which extends beyond the top of bank to top of bank on the western central portions of D-1. Drainage D-1 comprises 0.11 acre of CDFW riparian and bank-to-bank jurisdiction within the JDSA.

Drainage D-2 is defined by a bed and bank and function as an ephemeral drainage; therefore, it would be subject to potential CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Drainage D-2 comprises 0.019 acre of CDFW streambed (bank-to-bank) jurisdiction within the JDSA.

Non-Jurisdictional Features

Drainages D-3, D-4, and D-5 are not considered "streams", "rivers" or "lakes" under Section 1600 et seq. of the California Fish and Game Code. Although Drainage D-3 has a bed and bank, it is a relatively short, isolated ephemeral erosional feature that contains upland vegetation consistent with surrounding uplands. Drainages D-4 and D-5 do not exhibit a clear bed and bank and appear to convey ephemeral waters to the storm drain system located at the northern end of D-5 during rainfall. Therefore, these features would not be subject to regulation under Section 1602 of the Fish and Game Code. Table C details potential jurisdictional areas by drainage number and associated acreages.

Regional Water Quality Control Board Jurisdiction

Jurisdictional 401 Waters of the State

All the areas on site determined to be WOTUS under both current and historic USACE definitions and guidelines are also considered to be WOTS. However, in many cases, RWQCB jurisdiction extends beyond the limits of USACE jurisdiction and may also include areas not identified as subject to USACE jurisdiction.

While there are specific procedures for delineating State wetlands (SWRCB 2019), there is currently no formal statewide guidance on determining RWQCB non-wetland WOTS. Each RWQCB has the discretion to determine the occurrence and extent of jurisdictional non-wetland WOTS. In this particular case, the RWQCB potential jurisdiction (i.e., WOTS) would coincide with those waters that meet the USACE's current definition of WOTUS as well as any areas that satisfy the SWRCB's definition and delineation procedures regarding State wetlands.

Drainages D-1 and D-2 comprise 0.055 acres of potential non-wetland WOTS within the JDSA.

Non-Jurisdictional Features

Drainages D-3, D-4, and D-5 do not satisfy the criteria for WOTUS and therefore are not considered WOTS under the new definition and procedures (SWRCB 2019). In addition, Drainage D-3 is an

erosional feature which is typically not regulated by the RWQCB under the Porter-Cologne Water Quality Control Act.

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, eds. 2012. *The Jepson Manual: Vascular Plants of California*, Second Edition. Berkeley, California: University of California Press.

California Department of Fish and Wildlife (CDFW). n.d. California Streams. Biogeographic Information and Observation System. Website: https://apps.wildlife.ca.gov/bios/ (accessed September 2022).

Nationwide Environmental Title Research, LLC (NETR). 2022. Historic Aerials by NETRonline (v.0.5.42). Website: https://historicaerials.com (accessed September and October 2022).

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

_____. 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*.

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

_____. 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: ttps://cwbiapp.sec.usace.army.mil/nwpl_static/v34/home/home.html (accessed September 2022).

United States Department of Agriculture (USDA). 2016. Natural Resources Conservation Service (NRCS). 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 2022).

United States Environmental Protection Agency (EPA). n.d. Current Implementation of Waters of the United States. Website: https://www.epa.gov/wotus/current-implementation-waters-united-states (accessed January 11, 2022).

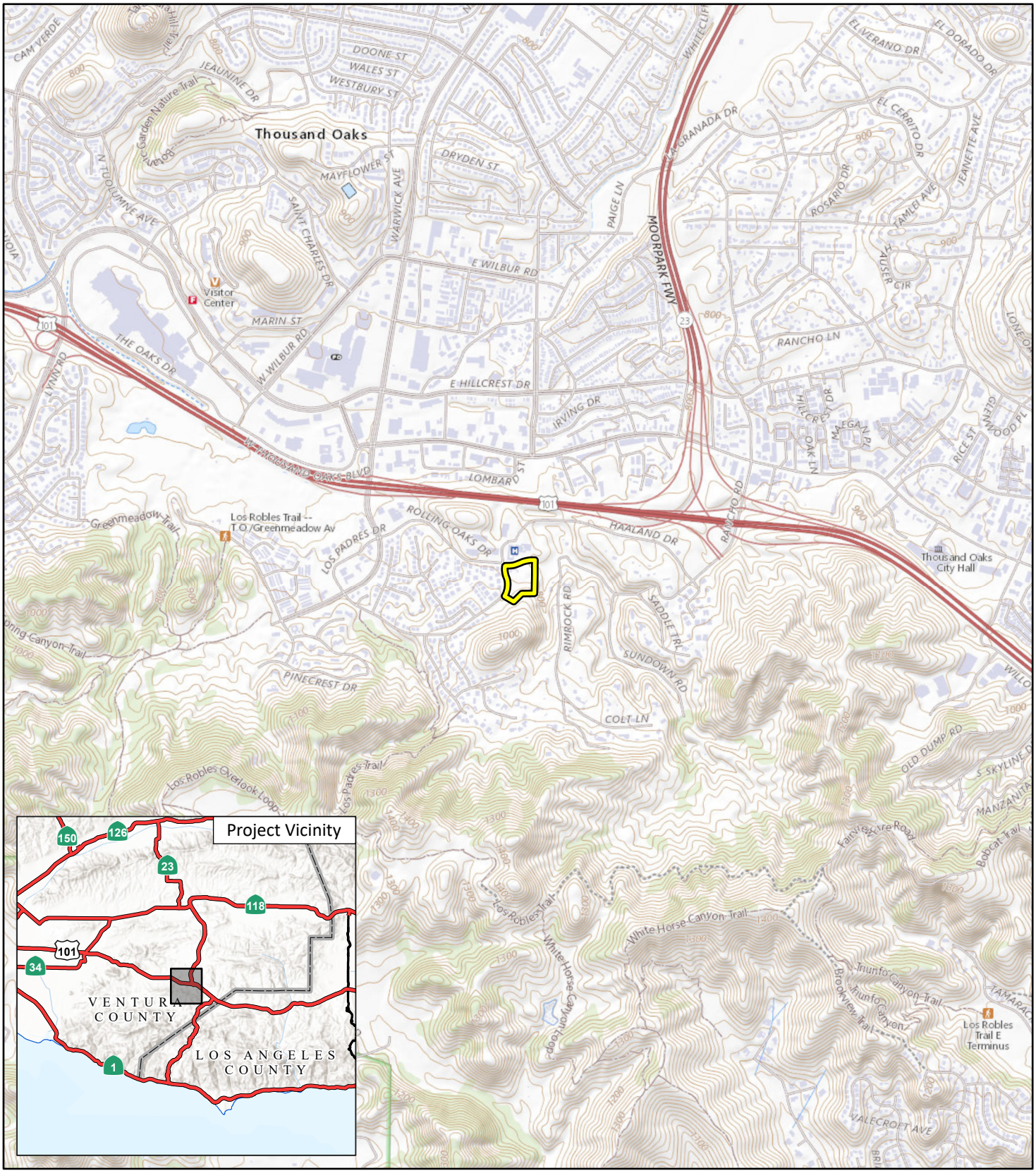
United States Environmental Protection Agency (EPA) and United States Army Corps of Engineers (USACE). 2020. The Navigable Waters Protection Rule: Definition of ‘‘Waters of the United States.’’ Final Rule. Federal Register, Vol. 85, No. 77. April 21.

United States Fish and Wildlife Service (USFWS). 2021. Wetlands Mapper. Website: https://www.fws.gov/wetlands/data/mapper.html (accessed September and October 2022).

United States Geological Survey (USGS). 2022. topoView. Records of the USGS *Thousand Oaks, California* 7.5-minute quadrangle maps from 1983, 1987, 2012, 2015, 2018, 2022. Website: https://ngmdb.usgs.gov/topoview/viewer/ (accessed September 2022).

APPENDIX A

FIGURES



LSA

FIGURE 1

Los Robles Hospital and Medical Center – Cancer Center

Regional and Project Location

SOURCE: USGS The National Map (2018)

C:\GIS\Projects\HCS2201\Pro\Thousand Oaks Cancer Center Project\Los Robles Hospital and Medical Center – Cancer Center.aprx (11/16/2022)

LSA

Project Location

National Wetland Inventory

Wetland - Riverine

N

0 50 100

FEET

SOURCE: Nearmap (8/30/2022)

FIGURE 2

Los Robles Hospital and Medical Center – Cancer Center

National Wetland Inventory

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LSA

FIGURE 3

Project Location

Soils

AzC - Azule gravelly loam, 5 to 9 percent slopes, warm

GvF - Gilroy loam, 15 to 50 percent slopes, very rocky

N

0 50 100

FEET

Los Robles Hospital and Medical Center – Cancer Center

Soils

SOURCE: Nearmap (8/30/2022)

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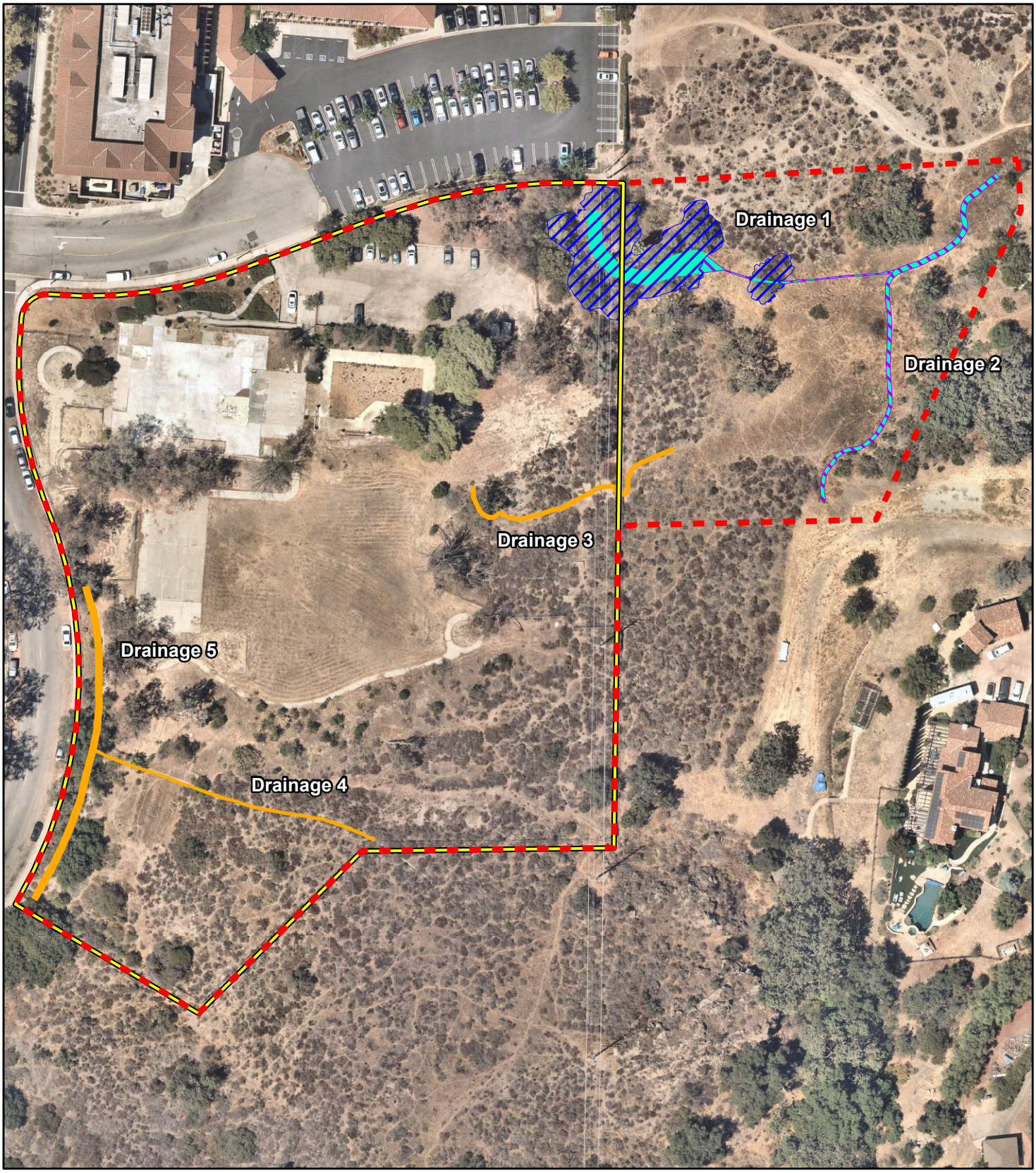

LSA

FIGURE 4

Project Location

Jurisdictional Delineation Study Area

CDFW Riparian Jurisdiction

CDFW Streambed (Bank-to-Bank) Jurisdiction

USACE Non-wetland WOTUS/
RWQCB Non-wetland WOTS

Non-jurisdictional Drainage

N

0 50 100

FEET

SOURCE: Nearmap (8/30/2022)

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Los Robles Hospital and Medical Center - Cancer Center

Delineation of Jurisdictional and Non-Jurisdictional Areas

Photo 1: View looking east from the western end of Drainage 1. Photo Date September 15, 2022

Photo 2: View looking at the box culvert located on the western end of Drainage 1. Photo Date September 15, 2022

LSA

FIGURE 5

Los Robles Hospital and Medical Center – Cancer Center Project

Representative Site Photos

Photo 3: View looking east from the eastern end of Drainage 1. Photo Date September 15, 2022

Photo 4: View looking south at the extent of Drainage 2. Photo Date September 15, 2022

Photo 5: View looking south from the western end of Drainage 3. Photo Date September 15, 2022

Photo 6: Typical view looking west at Drainage 4. Photo Date September 15, 2022

LSA

FIGURE 5

Los Robles Hospital and Medical Center – Cancer Center Project

Representative Site Photos

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Photo 7: Additional view looking northeast at Drainage 4. Photo Date September 15, 2022

Photo 8: Typical view looking south at Drainage 5. Photo Date September 15, 2022

LSA

FIGURE 5

Los Robles Hospital and Medical Center – Cancer Center Project

Representative Site Photos