APPENDIX A

JURISDICTIONAL DELINEATION REPORT (LSA, JULY 2017)

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JURISDICTIONAL DELINEATION REPORT

CANYON ESTATES DRIVE AND CANYON VIEW DRIVE INTERSECTION IMPROVEMENT PROJECT

CITY OF LAKE ELSINORE, CALIFORNIA

LSA

July 2017

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INTRODUCTION

The Canyon Estates Drive and Canyon View Drive Intersection Improvement Project (proposed project) is located in the City of Lake Elsinore (City) in Riverside County, California. The City proposes to realign and reconstruct the intersection of Canyon Estates Drive and Canyon View Drive located in the City's Lake Elsinore Hills District. In the existing condition, the intersection of Canyon Estates Drive and Canyon View Drive meets adjacent to and east of the intersection of Canyon View Drive and Grunder Drive, creating an irregular intersection. Therefore, the purpose of the proposed project is to improve the functionality of this irregular intersection by realigning and reconstructing the entire intersection to shift the intersection to the southwest. The realignment will allow for a standard, signalized four-way intersection that will connect the realigned Canyon Estates Drive with Franklin Street and the future Camino Del Norte extension (proposed under separate project). Canyon View Drive will connect to Franklin Street as a right-in/right-out intersection and will be stop controlled.

SITE DESCRIPTION

The proposed project is located on the United States Geological Survey 7.5-minute series *Lake Elsinore, California* topographical quadrangle. Land uses in the project vicinity include open space and low- to medium-density residential to the north, business professional to the south, hillside residential to the east, and commercial/mixed use to the east (Figure 1, Appendix A)

Elevations in the Jurisdictional Study Area (JSA) range from approximately 1,300 to 1,500 feet (ft) above mean sea level. The topography/landscape of the project area slopes downhill from north to south and is bordered by open space and undeveloped residential to the north, Interstate 15 (I-15) to the south and southeast, and residential to the west.

The climate is classified as Hot–Summer Mediterranean (i.e., an arid climate with hot, dry summers and moderately mild, wet winters). The average annual precipitation is approximately 12.5 inches. Although most of the precipitation occurs from November through May, thunderstorms may occur at other times of the year and can cause extremely high precipitation rates. Over the course of a year, temperatures typically range between 49 and 81 degrees Fahrenheit.

The JSA is located in the San Jacinto Valley Watershed, which is defined by the San Gabriel Mountains to the north, the San Bernardino National Forest to the northeast, the San Jacinto Mountains to the southeast, and the Santa Ana Mountains to the west. The tributaries within this watershed, including the JSA drainage features, collectively drain into the Santa Ana River and ultimately flow into the Pacific Ocean, a navigable water of the United States (U.S.).

REGULATORY BACKGROUND

UNITED STATES ARMY CORPS OF ENGINEERS

The United States Army Corps of Engineers (Corps) regulates discharge of dredged or fill material into waters of the U.S. These waters include wetland and nonwetland bodies of water that meet specific criteria. Corps regulatory jurisdiction pursuant to Section 404 of the Clean Water Act (CWA) is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters (TNW) used in interstate or foreign commerce, or may be indirect, through a nexus identified in the Corps regulations. The following definition of waters of the U.S. is from 33 Code of Federal Regulations (CFR) 328.3:

The term waters of the United States means:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce…;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams) … the use, degradation or destruction of which could affect interstate or foreign commerce…;

(4) All impoundments of waters otherwise defined as waters of the United States under the definition; and

(5) Tributaries of waters defined in paragraphs (a) (1)–(4) of CFR 328.3.

The Corps typically regulates as waters of the U.S. any body of water displaying an ordinary high water mark (OHWM). Corps jurisdiction over nontidal waters of the U.S. extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). 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). Corps jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

As discussed above, Corps regulatory jurisdiction under Section 404 of the CWA is founded on a connection between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with TNW used in interstate or foreign commerce, or may be indirect, through a nexus identified in the Corps regulations. In the past, an indirect nexus could potentially be established if isolated waters provided habitat for migratory birds, even in the absence of a surface connection to navigable water of the U.S. The 1984 rule that enabled the Corps to expand jurisdiction over isolated waters of this type became known as the Migratory Bird Rule. On January 9, 2001, the United States Supreme Court narrowly limited the Corps jurisdiction of "… nonnavigable, isolated, intrastate …" waters based solely on the use of such

waters by migratory birds and, particularly, the use of indirect indicators of interstate commerce (e.g., use by migratory birds that cross state lines) as a basis for jurisdiction. The United States Supreme Court's ruling derives from the case *Solid Waste Agency of Northern Cook County vs. United States Army Corps of Engineers*, No. 99-1178. The United States Supreme Court determined that the Corps exceeded its statutory authority by asserting CWA jurisdiction over an abandoned sand and gravel pit in northern Illinois, which provides habitat for migratory birds.

In 2006, the United States Supreme Court further considered the Corps jurisdiction of "… waters of the United States …" in the consolidated cases *Rapanos vs. United States* and *Carabell vs. United States* (126 Supreme Court 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. On June 5, 2007, the Corps 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 Corps will continue to assert jurisdiction over TNW, wetlands adjacent to TNW, relatively permanent nonnavigable tributaries that have a continuous flow at least seasonally (typically 3 months), and wetlands that directly abut relatively permanent tributaries.

The Corps will determine jurisdiction over waters that are nonnavigable tributaries that are not relatively permanent, and wetlands adjacent to nonnavigable tributaries that are not relatively permanent, only after making a significant nexus finding. The Corps will generally 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 Corps does reserve the right to regulate these waters on a case-by-case basis.

Furthermore, the preamble to the Corps regulations at CFR Section 328.3, Definitions, states that the Corps does not generally consider the following waters to be waters of the U.S. The Corps does, however, reserve the right to regulate the following waters on a case-by-case basis.

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

In some cases, waters found to be isolated and not subject to CWA regulation may be regulated by the Regional Water Quality Control Board (RWQCB) under the State Porter-Cologne Water Quality Control Act (Porter-Cologne Act), as described later in this section.

WETLANDS

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) (Corps 2008) and the Corps 1987 *Wetlands Delineation Manual* (1987). Where there are differences between the two documents, the Regional Supplement takes precedence over the 1987 Manual.

The Corps and the United States Environmental Protection Agency define wetlands as follows:

> 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 (three parameters): 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 soils 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 have lasted more than a few days or have occurred repeatedly over a period of years. Because of this, if an area lacks one of the three characteristics under normal conditions, the area is considered nonwetland under most circumstances.

Determination of wetland limits may be complicated by a variety of natural environmental factors or human activities, collectively called “difficult wetland situations,” including cyclic periods of drought and flooding, or highly ephemeral stream systems. During periods of drought, for example, bank return flows are reduced and water tables are lowered. This results in a corresponding lowering of the OHWM 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 the highly ephemeral systems typical of Southern California, these problems are encountered frequently. In these situations, professional judgment based on years of practical experience along with 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 Corps’ most current National Wetland Plant List (Lichvar 2016). Each species on that list is rated according to a wetland indicator category,

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

Table A: Hydrophytic Vegetation

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)

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 Corps 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 composing 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 plot. 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, Corps guidance provides that morphological adaptations may be considered when determining hydrophytic vegetation when indicators of hydric soil and wetland hydrology are present (Corps 2008). If the plant community passes either the dominance test or the prevalence index after reconsideration of the indicator status of any plant species that exhibit morphological adaptations for life in wetlands, then the vegetation is considered hydrophytic.

Hydric Soils[1]

Hydric soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.[2] Soils are considered likely to meet the definition of a hydric soil when one or more of the following criteria are met:

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

[2] The current definition as of 1994 (Federal Register July 13, 1994).

1. All Histels except Folistels and Histosols except Folists;
2. Soils that are frequently ponded for a long duration or very long duration[1] 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. While 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 20 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, a National List of Hydric Soils was created from the National Soil Information System database and is updated annually.

The Regional Supplement has a number of field indicators that may be used to identify hydric soils. The Natural Resources Conservation Service (Schoeneberger 2012) has also developed a number of field indicators that may demonstrate the presence of hydric soils. These indicators include hydrogen sulfide generation; the 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, the 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 (1987 Manual). The wetland hydrology parameter 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 (Regional Supplement 2008).

Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. 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 California Department of Fish and Wildlife (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 an intermittent flow of water. The

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

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 Corps 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 Corps 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 California RWQCB is responsible for the administration of Section 401 of the CWA. Typically, the areas subject to RWQCB jurisdiction coincide with those of the Corps (i.e., waters of the U.S., including any wetlands). The RWQCB may also assert authority over waters of the State under waste discharge requirements pursuant to the Porter-Cologne Act.

METHODOLOGY

Field biologists Lonnie Rodriguez and Laura Magee conducted the fieldwork for a jurisdictional delineation was on March 21, 2017. Potential federal and State jurisdictional features and Multiple Species Habitat Conservation Plan (MSHCP) Riparian/Riverine Areas were identified in the JSA, evaluated on foot, and mapped using aerial photographs. The project area was greatly reduced after the delineation was conducted; therefore, the larger study is still included in this assessment but the smaller project footprint was analyzed for impacts.

Areas of potential jurisdiction were evaluated according to the most current Corps and CDFW regulatory criteria and guidance. The boundaries of the potential jurisdictional areas within the JSA were observed in the field and were mapped on an aerial photograph (the scale is 1 inch = approximately 250 ft) that shows the potential JSA. Measurements of federal and State jurisdictional areas 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.

Areas supporting plant species that were potentially indicative of wetlands were evaluated according to routine wetland delineation procedures described in the Regional Supplement. Hydrological conditions, including any surface inundation, saturated soils, groundwater levels, and/or other wetland hydrology indicators were also noted. General site characteristics were also noted throughout all potential jurisdictional areas.

RESULTS

Based on close examination of historical and recent aerial photography and fieldwork, the consultant biologist identified three unnamed drainages and a basin occurring in the JSA [i.e., Drainages 1 (D-1), 2 (D-2), 3 (D-3) and a basin]. Drainages 1, 2, and 3 and the basin are located north of I-15 at the intersection of Canyon Estates Drive and Canyon View Drive and are located in the City's Lake Elsinore Hills District (Figure 2, Appendix A). All three drainages plus the basin are within the JSA, but only D-3 is within the proposed project footprint.

Drainages 1, 2, and 3 and the basin are earthen ephemeral drainages that convey flows from north to south during and immediately after storm events; the vegetation associated with all three drainage features and the basin consists of facultative upland and/or obligate upland plants (e.g., *Bromus madritensis*, *Dichelostemma capitatum*, and *Amsinckia menziesii* var. *intermedia*). The dominant plant species associated with these drainages and the basin are nonnative grasses.

D-1 is a naturally occurring drainage feature. D-1 is the westernmost drainage in the JSA, conveys flows adjacent to an uplifted slope, and the flow patterns are influenced by off-road vehicle use. This is a compound channel characterized by multiple terraces in an active floodplain with frequently shifting channel(s) (Representative Site Photos, Appendix B) (Corps 2008).

D-2 is a discontinuous ephemeral stream that receives ephemeral flows from an open space area just north of Grunder Drive. Flows are conveyed under the road through a 3-ft diameter corrugated metal pipe. This feature is very wide and is deeply channelized, and the incised areas are within the low-flow and active floodplain (Representative Site Photos, Appendix B).

D-3 is the easternmost drainage feature and is also a discontinuous ephemeral stream that receives ephemeral flows from the sloping hills located to the northeast. Flows converge into this channel just north of where Canyon Estates Drive and East Franklin Street intersect at the hairpin turn. Ephemeral flows are conveyed under the hairpin turn through three 4-ft diameter reinforced concrete pipes, and then south through an earthen drainage. On the west side of East Franklin Street, a drop-down drainage channel conveys flows under East Franklin Street through a 1-ft corrugated metal pipe into D-3 just south of the reinforced concrete pipes. The incised areas are within the low-flow and active floodplain (Representative Site Photos, Appendix B). This drainage is the only one within the proposed project footprint.

The basin was constructed on the south side of Grunder Drive just northwest of D-2. Water conveyed into this basin is upland storm water runoff from Grunder Drive and from a corrugated metal outlet pipe that conveys ephemeral flows from a swale on the north side of Grunder Drive.

During large storm events, all three drainage channels and the basin have the potential to convey flows into an unnamed concrete drainage feature located on the north side of and parallel to I-15. Site-specific conditions and channel measurements were recorded, and the drainages and basin were mapped.

POTENTIAL UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTION

Nonwetland Waters of the United States

Drainage 1

This is a naturally occurring, earthen drainage channel that conveys ephemeral flows. The drainage exhibits indicators of OHWMs that include active floodplain silt deposits and a change in soil particle sizes. The upland vegetation associated with D-1 includes *Amsinckia menziesii* var. *intermedia*, *Bromus madritensis*, and *Brassica nigra*. D-1 did not satisfy the three requisite criteria for jurisdictional wetlands and, therefore, would be considered nonwetlands. This drainage is not located within the proposed project footprint and will not be affected by the project.

Drainages 2 and 3

These two earthen drainages convey ephemeral flows. These drainages are entrenched and exhibit indicators of OHWMs that include a change in soil particle size distribution and silt deposits. The associated vegetation consists of sparse, low-growing upland plant species similar to those identified for D-1. Neither D-2 nor D-3 satisfied the three requisite criteria for jurisdictional wetlands and, therefore, these drainages would be considered nonwetlands.

Basin

This feature temporarily retains storm water runoff from an upland swale and Grunder Drive. The basin exhibited OHWMs that included the outer edge of mud-cracked soils, silt deposits, and drift lines. The basin did not satisfy the three requisite criteria for jurisdictional wetlands and, therefore, would be considered nonwetland. The basin is not located within the proposed project footprint and will not be affected by the project.

During large storm events, all three drainages and the basin have the potential to convey water into an unnamed concrete drainage feature adjacent to I-15. This roadside drainage feature is a tributary to the San Jacinto River, which conveys water to Lake Elsinore. Water drains from Lake Elsinore into Walker Canyon, which is a tributary to Temescal Wash, and Temescal Wash is a tributary to the Santa Ana River, which ultimately conveys flows to the Pacific Ocean, a TNW.

POTENTIAL CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE JURISDICTION

Streambeds

Drainages 1, 2, and 3

These earthen ephemeral drainage channels have defined channel beds and banks but lack any riparian vegetation/habitat.

Basin

This earthen basin does not contain any riparian vegetation/habitat but does appear to convey storm water runoff from the site to a concrete, roadside drainage channel. The basin has a defined basin bottom and banks.

MULTIPLE SPECIES HABIAT CONSERVATION PLAN AREAS

Riparian/Riverine Areas

As described above, Drainages 1, 2, and 3 and the basin are earthen waterbodies that convey seasonal storm water runoff from the JSA to an off-site drainage channel. Drainages 2 and 3 are within the biological study area (BSA), but drainage 3 is the only one located within the proposed project footprint. These drainages and the basin exhibit certain characteristics that would make them subject to the Western Riverside County MSHCP; these characteristics include having physically defined beds and banks and functioning as part of a channelized drainage system in an active floodplain. The MSHCP defines Riparian/Riverine areas as "lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." The Riparian/Riverine areas discussed in this report are based on the CDFW jurisdictional areas. The drainages and the basin do not contain any riparian vegetation; therefore, they are categorized as Riverine. The locations of the Riverine areas that occur on site are shown on Figure 3.

CONCLUSIONS

POTENTIAL UNITED STATES ARMY CORPS OF ENGINEERS JURISDICTION

Areas subject to potential Corps jurisdiction pursuant to Section 404 of the CWA include D-1, D-2, D-3, and the basin. These waterbodies exhibit OHWMs and have connectivity to the Pacific Ocean (a TNW) via the Santa Ana River; therefore, these waterbodies would be considered waters of the U.S. Furthermore, none of the three drainages or the basin satisfied the criteria for jurisdictional wetlands. Table B provides a breakdown of the features in the JSA that are subject to potential Corps jurisdiction.

Table B: Potential United States Army Corps of Engineers Jurisdictional Areas

Drainage ID	Nonwetland Waters (acres)	Wetlands (acres)	Total Corps Jurisdiction (acres)
Drainage 1	0.07	0	0.07
Drainage 2	0.03	0	0.03
Drainage 3	0.03	0	0.03
Basin 1	0.00 (0.001)	0	0.00 (0.001)
Total	**0.13**	**0**	**0.13**

Acres () have been rounded to two significant digits.
Corps = United States Army Corps of Engineers

POTENTIAL CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE JURISDICTION

Potential CDFW jurisdiction in the JSA is associated with Drainages 1, 2, and 3 and the basin. Although riparian vegetation is not associated with these four waterbodies, they nevertheless exhibit defined beds and banks and periodically convey runoff to an off-site drainage channel. Therefore, D-1, D-2, D-3 and the basin would be subject to potential CDFW jurisdiction pursuant to Section 1602 of the California Fish and Game Code. Table C provides a quantitative summary of the potential CDFW jurisdictional areas in the JSA.

Table C: Potential California Department of Fish and Wildlife Jurisdictional Areas

Drainage ID	Total CDFW Jurisdiction (acres)
Drainage 1	0.07 (0.071)
Drainage 2	0.29 (0.287)
Drainage 3	0.30
Basin	0.07
Total	**0.72**

Acres () have been rounded to two significant digits.
CDFW = California Department of Fish and Wildlife

MULTIPLE SPECIES HABITAT CONSERVATION PLAN AREAS

The areas subject to MSHCP protection of Riparian/Riverine areas are Drainages 1, 2, and 3 and the basin. These features exhibit channelization, an active floodplain, and beds and banks, and would be subject to the MSHCP, Section 6.1.2.

Table D: Total Areas Subject to Multiple Species Habitat Conservation Plan

Drainage ID	Riverine Areas (acres)		Total MSHCP (acres)
Drainage 1	0.07 (0.071)		0.07 (0.071)
Drainage 2	0.29 (0.287)		0.29 (0.287)
Drainage 3	0.30		0.30
Basin 1	0.07		0.07
Total	**0.72**		**0.72**

Acres () have been rounded to two significant digits.
MSHCP = Multiple Species Habitat Conservation Plan

REGIONAL WATER QUALITY CONTROL BOARD JURISDICTION

Because there is no current public guidance on determining RWQCB jurisdictional areas, jurisdiction was determined based on the federal definition of wetlands and other waters of the U.S. as recommended by the September 2004 Workplan (State Water Resources Control Board 2004). RWQCB jurisdiction was considered coincident with Corps jurisdiction for the purposes of Section 401 certification. Therefore, 0.13 acre of RWQCB jurisdiction is located in the JSA.

DISCLAIMER

The findings and conclusions presented in this report, including the locations and extents of wetlands and other waters 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.

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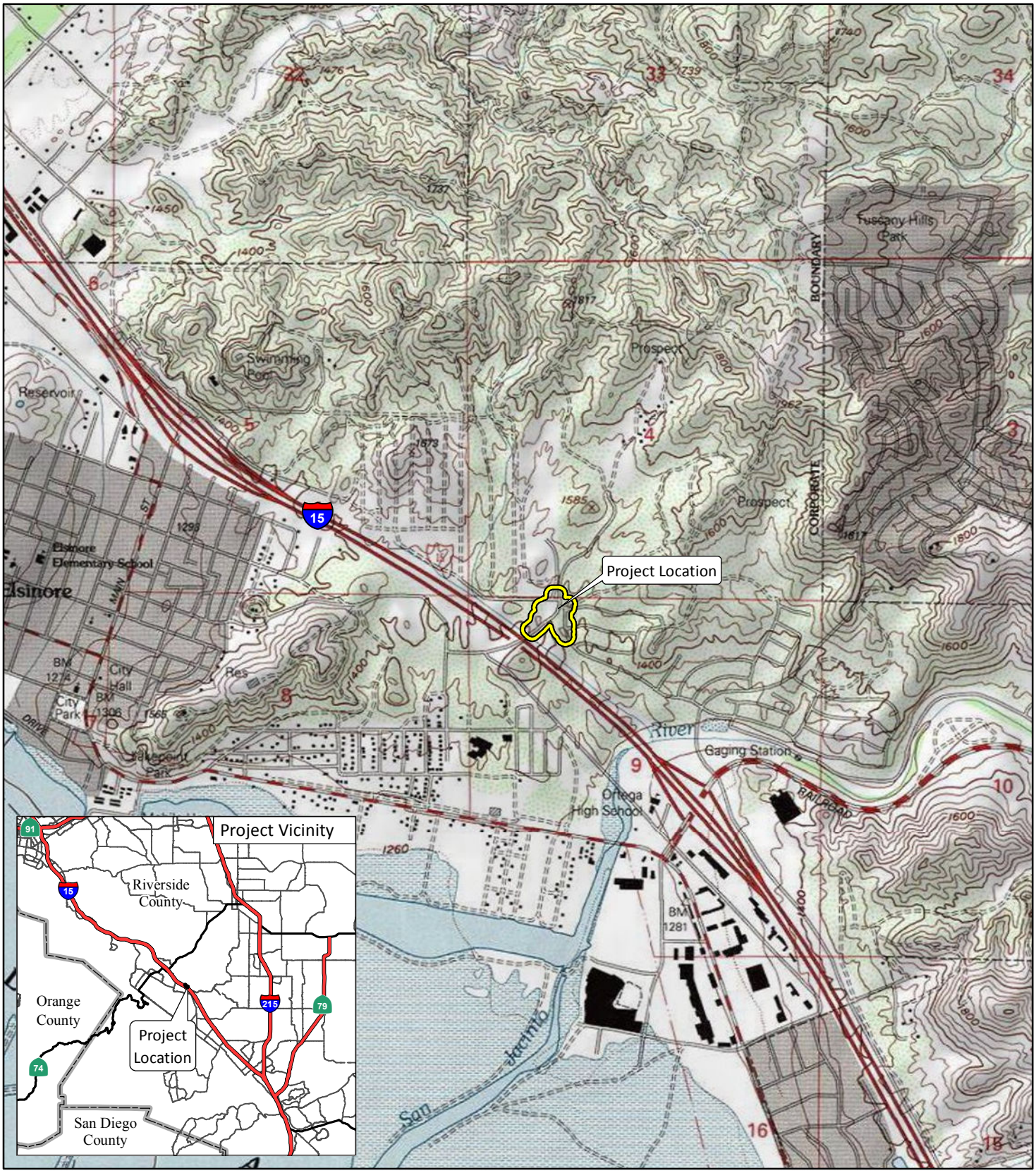
APPENDIX A

FIGURES 1–3



LSA

LEGEND

Study Area

FIGURE 1

N

0 1000 2000

FEET

Canyon Estates Drive and Canyon View Drive Intersection Improvement

Project Location

SOURCE: USGS 7.5' Quad - Lake Elsinore (1988)

I:\SAE1701\GIS\ProjectLocation_USGS.mxd (7/19/2017)

LSA

LEGEND

- Project Footprint
- Corps Jurisdiction (0.13 ac)
- CDFW Jurisdiction (0.72 ac)
- Photo Point

0 90 180
FEET

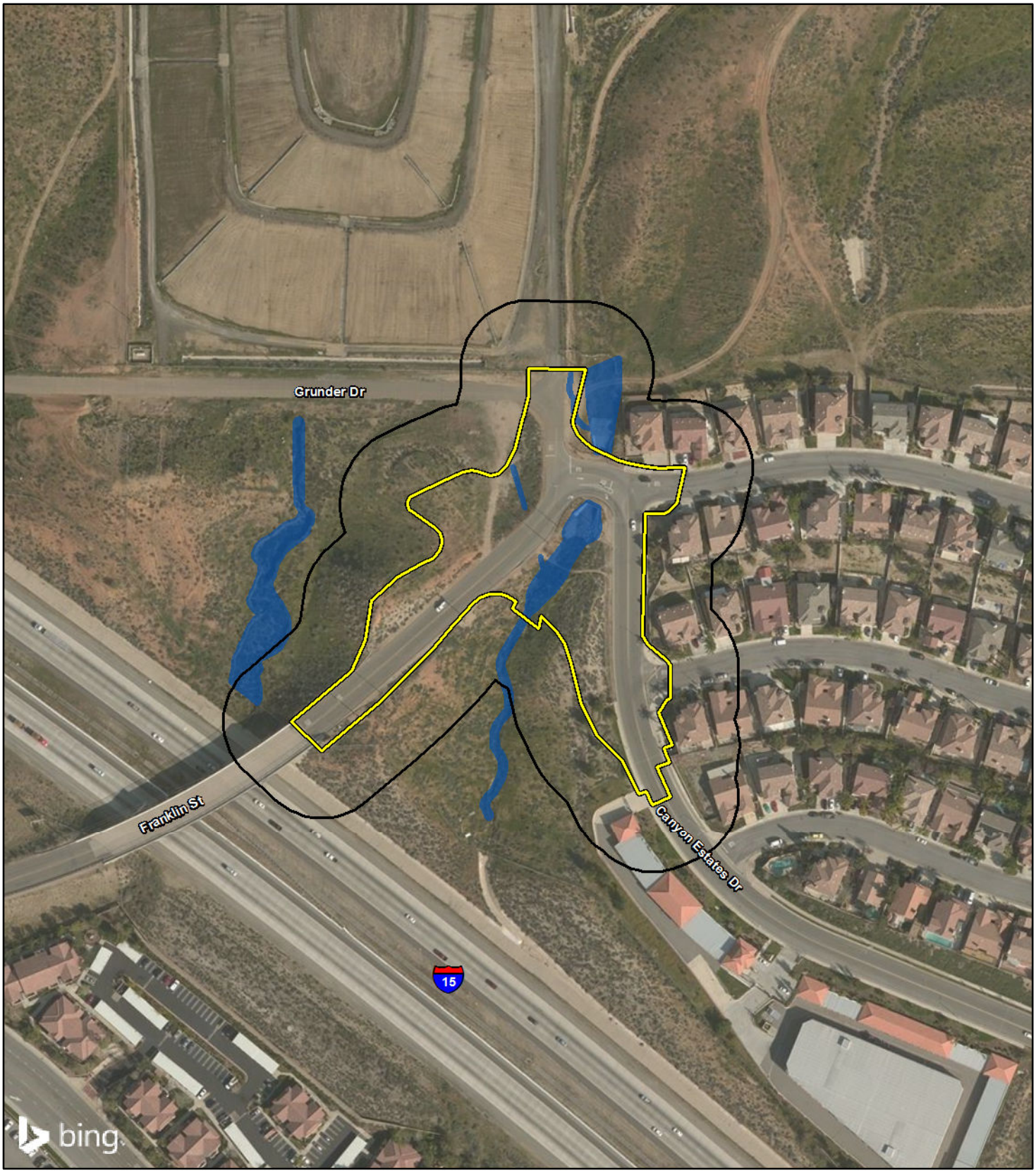
SOURCE: Bing Maps (2014); SCE Engineering (2017)

I:\SAE1701\GIS\JD.mxd (6/28/2017)

FIGURE 2

Canyon Estates Drive and Canyon View Drive Intersection Improvement

Jurisdictional Delineation



LSA

LEGEND

Study Area

Project Footprint

MSHCP Riverine (0.58 ac)

0 100 200

FEET

FIGURE 3

Canyon Estates Drive and Canyon View Drive Intersection Improvement

MSHCP Riverine

SOURCE: Bing Maps (2014); SCE Engineering (2017)

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APPENDIX B

REPRESENTATIVE SITE PHOTOS

View looking north at the active floodplane of Drainage 1, (3/21/2017).

Drainage 2, view looking north within the entrenched drainage, (3/21/2017).

Drainage 3, view looking south at the entrenched drainage, (3/21/2017).

View looking north at the constructed earthen basin, (3/21/2017).

APPENDIX C

FUNCTIONS AND VALUES ANALYSIS

APPENDIX C

ANALYSIS OF FUNCTIONS AND VALUES

OF WETLANDS AND OTHER WATERS

The following is a qualitative assessment of the functions and values attributable to the identified wetlands and other potential jurisdictional waters in the biological study area (BSA). All wetlands and other waters have some degree of functionality, and no single wetland can perform all the functions considered below. The following functions are analyzed at low, moderate, or high value levels. Each individual jurisdictional drainage is analyzed in Table B-1 based on the criteria outlined below.

Hydrologic Regime. This function is the ability of a wetland or stream to absorb and store water below ground. The degree of this saturation is dependent on the soil composition and is affected by prior flooding events. For example, clay soils possess more pore space than sandy soils. However, the smaller pore size slows the rate at which water is absorbed and released; therefore, clay soil has a lower capacity to store water than sandy soils. The storage of water belowground allows for the fluctuation between anaerobic and aerobic conditions that benefit environmental conditions necessary for microbial cycling.

Flood Storage and Flood Flow Modification. This function is determined based on the ability of a wetland or stream at which the peak flow in a watershed can be attenuated during major storm events and during peak domestic flows to take in surface water that may otherwise cause flooding. This is dependent on the size of the wetland or stream, the amount of water it can hold, and the location in the watershed. For instance, larger wetlands or streams that have a greater capacity to receive waters have a greater ability to reduce flooding. In addition, areas high in the watershed may have more ability to reduce flooding in downstream areas, but areas lower in the watershed may have greater benefits to a specific area. Vegetation, shape, and the configuration of the wetland or stream may also affect flood storage by dissipating the energy of flows during flood events.

Sediment Retention. Removal of sediment is the process that keeps sediments from migrating downstream. This is accomplished through the natural process of sediment retention and entrapment. This function is dependent on the sediment load being delivered by runoff into the watershed. Similar to the above, the vegetation, shape, and configuration of a wetland will also affect sediment retention if water is detained for long durations, as would be the case with dense vegetation, a bowl-shaped watershed, or slow-moving water. This function would be demonstrated (i.e., high) if the turbidity of the incoming water is greater than that of the outgoing water.

Nutrient Retention and Transformation. Nutrient cycling consists of two variables: uptake of nutrients by plants and detritus turnover, in which nutrients are released for uptake by plants downstream. Wetland systems in general are much more productive with regard to nutrients than upland habitats. The regular availability of water associated with the wetland or stream may cause

the growth of plants (nutrient uptake) and associated detritivores and generate nutrients that may be used by a variety of aquatic and terrestrial wildlife downstream.

Toxicant Trapping. The major processes by which wetlands remove nutrients and toxicants are as follows: (1) by trapping sediments rich in nutrients and toxicants, (2) by absorption to soils high in clay content or organic matter, and (3) through nitrification and denitrification in alternating oxic and anoxic conditions. Removal of nutrients and toxicants is closely tied to the processes that provide for sediment removal.

Social Significance. This is a measure of the probability that a wetland or stream will be used by the public because of its natural features, economic value, official status, and/or location. This includes its being used by the public for recreational uses (e.g., boating, fishing, birding, and walking) and other passive recreational activities. A wetland or stream that is used as an outdoor classroom, is a location for scientific study, or is near a nature center would have a higher social significance standing.

Wildlife Habitat. General habitat suitability is the ability of a wetland to provide habitat for a wide range of wildlife. Vegetation is a large component of wildlife habitat. As plant community diversity increases along with connectivity with other habitats, so does potential wildlife diversity. In addition, a variety of open water, intermittent ponding, and perennial ponding is also an important habitat element for wildlife.

Aquatic Habitat. The ability of a wetland or stream to support aquatic species requires that there be ample food supply, pool and riffle complexes, and sufficient soil substrate. Food supply is typically in the form of aquatic invertebrates and detrital matter from nearby vegetation. Pool and riffle complexes provide a variety of habitats for species diversity as well as habitat for breeding and rearing activities. Species diversity is directly related to the complexity of the habitat structure.

Table B-1: Functions and Values of Drainages within the Study Area

Drainage	Hydrologic Regime	Flood Storage and Flood Flow Modification	Sediment Retention	Nutrient Retention and Transformation	Toxicant Trapping	Social Significance	Wildlife Habitat	Aquatic Habitat
Drainage 1	Low	Low	Low	Low	Low	Low	Low	Low
Drainage 2	Low	Low	Low	Low	Low	Low	Low	Low
Drainage 3	Low	Low	Low	Low	Low	Low	Low	Low
Basin	Low	Low	Low	Low	Low	Low	Low	Low