

ALL AMERICAN ASPHALT AMENDMENT PROJECT

CITY OF CORONA, RIVERSIDE COUNTY, CALIFORNIA

DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

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July 2018

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The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.



Travis J. McGill
Director



Thomas J. McGill, Ph.D.
Managing Director

July 2018

Executive Summary

ELMT Consulting (ELMT) has prepared this Delineation of State and Federal Jurisdictional Waters Report for the All American Asphalt Corona Quarry (subject property) Amendment Project (Project), located in the City of Corona, Riverside County, California. The jurisdictional delineation documents the regulatory authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Sections 1600 *et. seq.* of the California Fish and Game Code.¹

These drainages flow into a detention basin at the bottom of the mountain ridge, just south of the existing residential developments. The detention basin flows into a concrete lined channel that eventually flows north into the Arlington Valley Channel which has a surface hydraulic connection to Temescal Wash. Temescal Wash flows into the Santa Ana River (Relatively Permanent Water) which is ultimately tributary to the Pacific Ocean (Traditional Navigable Water). Therefore, the five drainage features qualify as waters of the United States and fall under the regulatory authority of the Corps, Regional Board, and CDFW.

Table ES-1: On-Site Jurisdictional Areas

Jurisdictional Feature	Corps/Regional Board Jurisdiction Non-Wetland Waters On-Site Jurisdiction Acreage (Linear Feet)	CDFW Jurisdictional Streambed/Riparian On-Site Jurisdiction Acreage (Linear Feet)
Drainage 1	0.017 (379)	0.017 (379)
Drainage 2	0.077 (1,301)	0.177 (1,301)
Drainage 3	0.024 (516)	0.024 (516)
Drainage 4	0.021 (468)	0.021 (468)
Drainage 5	0.020 (439)	0.020 (439)
TOTAL	0.16 (3,103)	0.26 (3,103)

Impacts to on-site jurisdictional areas will require the following regulatory approvals prior to project implementation: CWA Section 404 Nationwide Permit, CWA Section 401 Water Quality Certification, and Section 1602 Lake or Streambed Alteration Agreement. Refer to Sections 1-7 for a detailed analysis of site conditions and regulatory requirements.

¹ The field surveys for this jurisdictional delineation were conducted on July 3, 2018 pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008); and *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (Corps 2017); *The MESA Field Guide: Mapping Episodic Stream Activity* (CDFW 2014); and a *Review of Stream Processes and Forms in Dryland Watersheds* (CDFW 2010).

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LIST OF ACRONYMS

CDFW	California Department of Fish and Wildlife
Corps	United States Army Corps of Engineers
CWA	Clean Water Act
ELMT	ELMT Consulting
EPA	Environmental Protection Agency
NRCS	Natural Resources Conservation Service
NWP	Nationwide Permit
OHWM	Ordinary High Water Mark
Rapanos	Rapanos v. United States
Regional Board	Regional Water Quality Control Board
SMP	Surface Mining Permit
SWANCC	Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers
SWRCB	State Water Resources Control Board
TNW	Traditional Navigable Water
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

Section 1 Introduction

This delineation has been prepared for All American Asphalt in order to document the jurisdictional authority of the U.S. Army Corps of Engineers' (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Sections 1600 *et seq.* of the California Fish and Game Code. The analysis presented in this report is supported by field surveys and verification of site conditions conducted on July 3, 2018. This jurisdictional delineation explains the methodology undertaken by ELMT Consulting (ELMT) to define the regulatory authority of the aforementioned regulatory agencies and documents the findings made by ELMT.

1.1 PROJECT LOCATION

The subject property is generally located east of Interstate 15, south of State Route 91, west of Lake Mathews, and north of Cajalco Road in the City of Corona, Riverside County, California (Exhibit 1, *Regional Vicinity*). The subject property is depicted on the Corona South quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series in an unsectioned area of Range 6 west, Township 3 south (Exhibit 2, *Site Vicinity*). Specifically, the subject property is located east of Temescal Wash, south of Indiana Avenue, and approximately 3 miles west of Lake Mathews (Exhibit 3, *Subject Property*).

1.2 PROJECT DESCRIPTION

The All American Asphalt Corona Quarry (subject property) is an existing rock quarry. Operations include extraction and processing of native rock for production of asphaltic grade construction aggregates from an approximately 263-acre site in the City of Corona, Riverside County, CA.

The purpose of the proposed amendment to Surface Mining Permit (SMP) 95-1(modified) and the associated Reclamation Plan is to:

- Extend the permit date to 2121;
- Mine beneath the existing processing plant after moving the processing plant to a backfilled area;
- Increase excavation depth to an elevation of 400 feet above mean sea level;
- Expand the excavation to areas that have been used for processing, storage, asphalt batching and equipment maintenance;
- Modify the phasing plan from 3 to 5 phases to be more compatible with site operations; and
- Reduce the SMP boundary to 263-acres to include support facilities.

Movement of the processing plant and mining beneath the current plant location would be conducted during later phases of the project. These modifications will increase total aggregate yield from 127 million tons to approximately 177 million tons. All existing reclamation standards will remain in effect; no additional acreage will be added to the mining area and no change in operational intensity is proposed.

Reclamation of the Project will be phased with mining and will return the site to open space for slope areas and industrial use for finished pads in compliance with the underlying land use designation for the property.

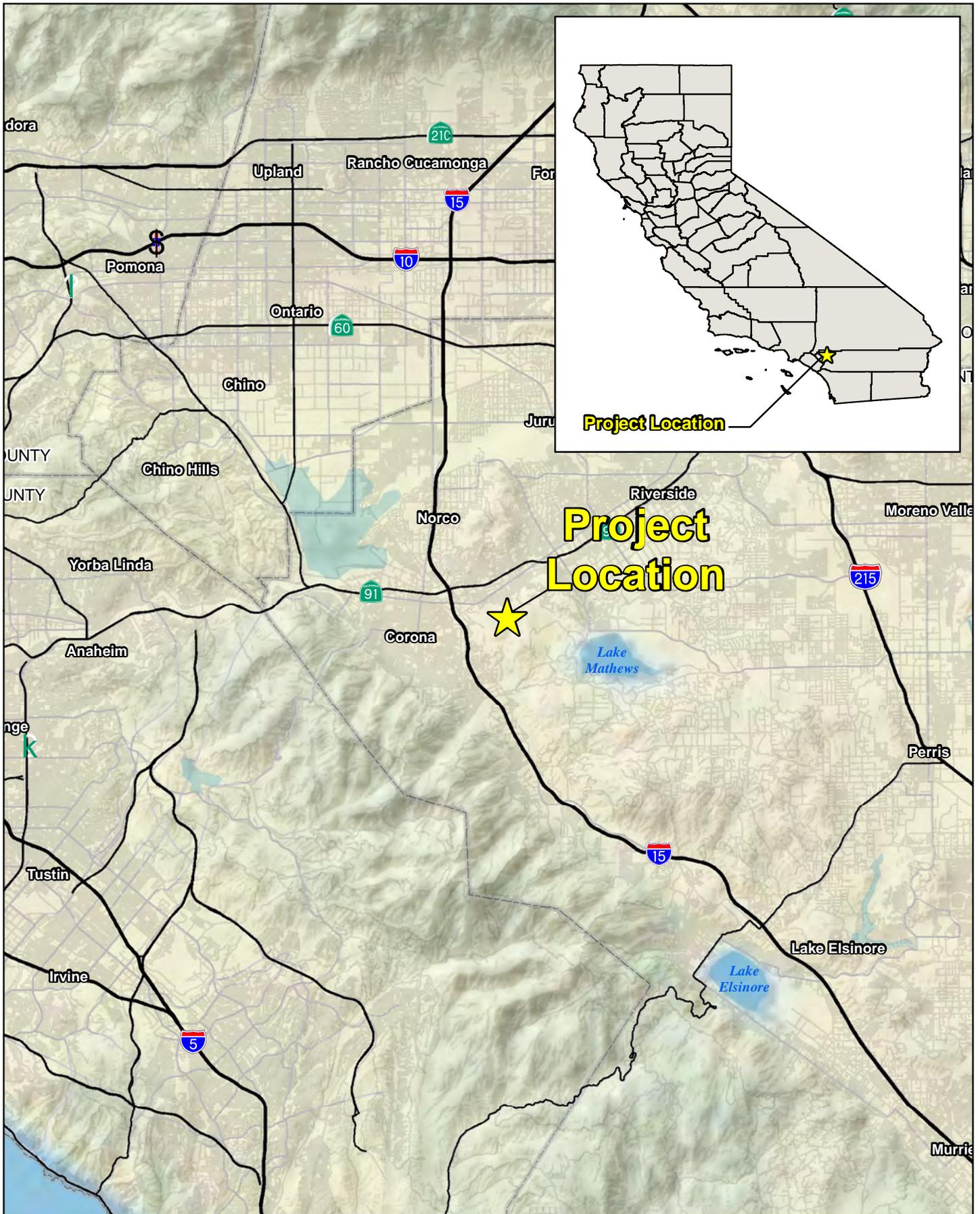
No other substantial changes to the permit and reclamation plan are proposed. There will be no change in traffic generation, processing capabilities or throughput. The proposal specifically does not seek to expand mining onto undisturbed areas outside of the approved permit area nor increase the annual production rates.

Table 1 summarizes the proposed changes and compares key elements of the approved permit with the revised surface mining permit and reclamation plan amendment, followed by a discussion of plan differences. This amended plan provides several benefits, including (but not limited to):

- Developing a mining design that progresses down slope in a uniform, efficient manner, reclaiming slope areas as they become available, as opposed to the inefficient mine phasing approach currently implemented;
- Recover all economically available resource on the property. As a result, implementation of this reclamation plan will not affect future mining on the site; and
- Maintaining a construction aggregates facility adjacent to the regional highway system and markets.

Table 1: Existing and Proposed Modifications

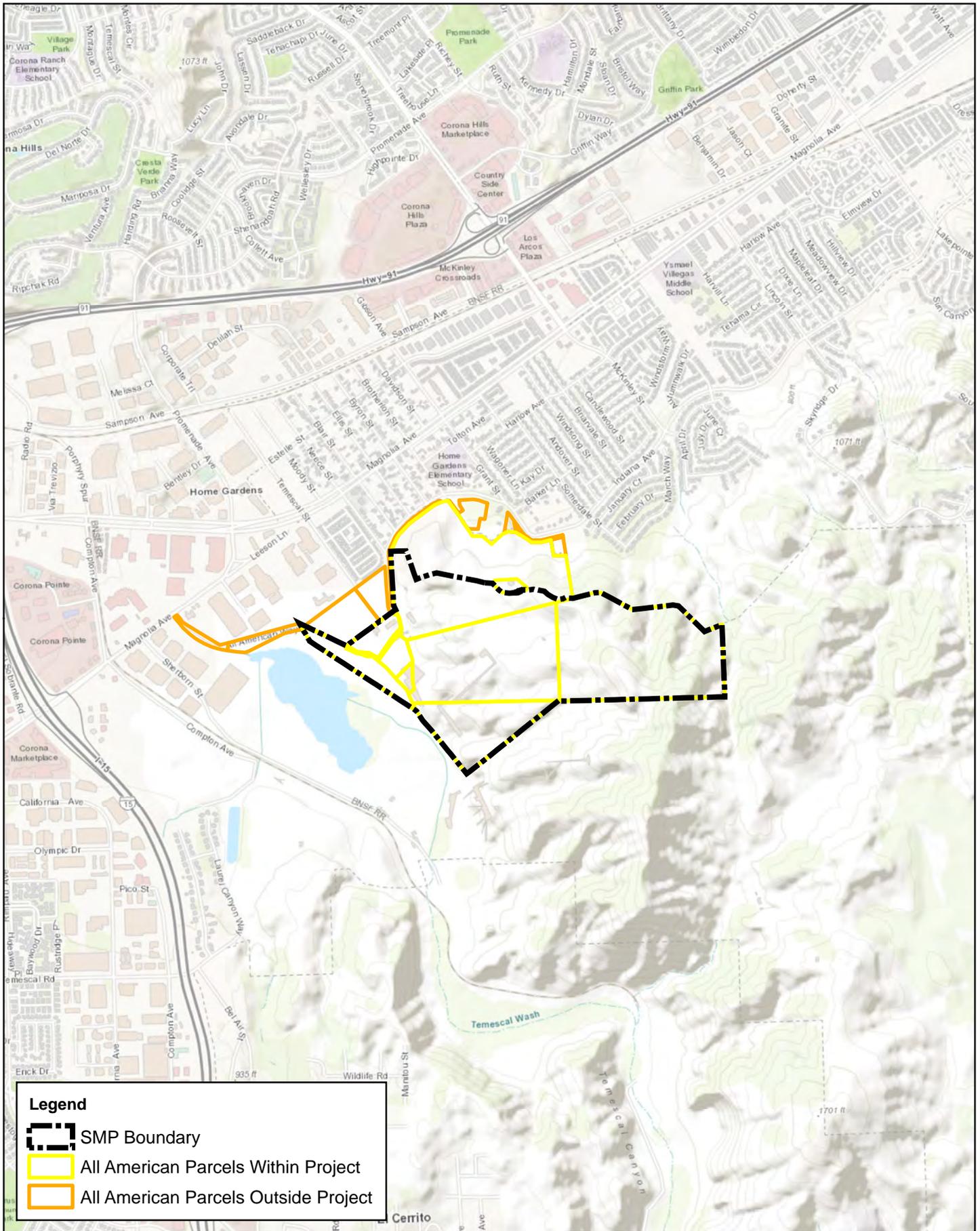
Item	Existing	Proposed Modification	Effect
Excavation Depth	500 feet elevation	400 feet elevation	Increase excavation depth by 100 feet vertical
Final Cut Slopes	60-degree bench face with 10-foot bench every 50 vertical feet	80-degree bench face w 25-foot bench every 50 vertical feet. 0.87h:1V overall cut slope	Steeper bench faces & wider, safer benches
Total Mined	112 million tons	177 million tons	Increase reserves by 65 million tons
Permit Expiration	May 15, 2021	December 31, 2121	Extend permit expiration date to 100 years
Mine Phases	Three Phases	Five Phases	Increase phases by 2 for improved operational/reclamation compatibility
Mine Excavation	233 acres	Decrease former excavation area by 4 acres to 229 acres	Identify excavation areas
SMP Boundary	298 acres	Reduce SMP boundary to 263 acres within City limits only.	Correction of parcel boundaries in determining acreage results in an increase in the SMP area.
Operating Hours	24	No Change	No Change
Traffic	No Restriction	No Change	No Change



ALL AMERICAN ASPHALT
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS
Regional Vicinity

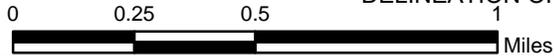


Source: ESRI Relief Map, National Highway Planning Network



Legend

-  SMP Boundary
-  All American Parcels Within Project
-  All American Parcels Outside Project



Source: Riverside County, ESRI USA Topographic Basemap

ALL AMERICAN ASPHALT
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS
Site Vicinity



Legend

-  SMP Boundary
-  All American Asphalt Parcels Within Project
-  All American Asphalt Parcels Outside Project

Section 2 Regulations

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Division regulates activities pursuant to Section 404 of the CWA, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act. The Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates activities under Sections 1600 *et seq.* of the California Fish and Game Code.

2.1 U.S. ARMY CORPS OF ENGINEERS

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the discharge of dredged or fill material into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps and EPA define “fill material” to include any “material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States.” Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and “materials used to create any structure or infrastructure in the waters of the United States.” The terms *waters of the United States* and *wetlands* are defined under CWA Regulations 33 Code of Federal Regulations (CFR) §328.3 (a) through (b) and within Appendix A of this report.

Generally, the Corps will assert jurisdiction over the following waters:

- Traditional navigable waters; or
- Wetlands adjacent to traditional navigable waters; or
- Non-navigable tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); or
- Wetlands that directly abut such tributaries.

The Corps and Environmental Protection Agency (EPA) will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable water:

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

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 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. It should be noted a significant nexus includes consideration of hydrologic and ecologic factors.

The Corps and EPA 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); or
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

2.2 REGIONAL WATER QUALITY CONTROL BOARD

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Boards that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board (SWRCB) assumes this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

Additionally, the California Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Water Quality Control Act has become an important tool post *Solid Waste Agency of Northern Cook County vs. United States Corps of Engineers*² (SWANCC) and *Rapanos v. United States*³ (Rapanos) court cases with respect to the State's regulatory authority over isolated and insignificant waters. Generally, any applicant proposing to discharge waste into a water body must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include discharge of dredged and fill material into water bodies.

2.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq.* of the California Fish and Game Code establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided. Pursuant to Section 1602 of the California Fish and Game Code, a notification must be submitted to the CDFW for any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream or use material from a streambed. This includes activities taking place within rivers or streams that flow perennially or episodically and that are defined by the area in which surface water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical and biological indicators.

² Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001)

³ Rapanos v. United States, 547 U.S. 715 (2006)

Section 3 Methodology

The analysis presented in this report is supported by field surveys and verification of site conditions conducted on July 3, 2018. ELMT conducted a field delineation to determine the jurisdictional limits of “waters of the United States” and “waters of the State” (including potential wetlands and vernal pools), located within the boundaries of the subject property. While in the field, jurisdictional features were recorded on a aerial base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin Map62 Global Positioning System to record and identify specific widths for ordinary high water mark (OHWM) indicators and the locations of photographs, soil pits, and other pertinent jurisdictional features, if present. This data was then transferred as a .shp file and added to the Project's jurisdictional exhibits. The jurisdictional exhibits were prepared using ESRI ArcInfo Version 10 software.

3.1 WATERS OF THE UNITED STATES

In the absence of adjacent wetlands, the limits of the Corps jurisdiction in non-tidal waters extend to the OHWM, which 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 areas.*”⁴ Indicators of an OHWM are defined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008). An OHWM can be determined by the observation of a natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community. The Regional Board shares the Corps’ jurisdictional methodology, unless SWANCC or Rapanos conditions are present. In the latter case, the Regional Board considers such drainage features to be jurisdictional waters of the State.

Pursuant to the Corps Wetland Delineation Manual (Corps 1987), the identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. In order to qualify as a wetland, a feature must exhibit at least minimal characteristics within each of these three parameters. It should also be noted that both the Regional Board and CDFW follow the methods utilized by the Corps to identify wetlands. For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008).

⁴ CWA regulations 33 CFR §328.3(e).

3.2 WATERS OF THE STATE

3.2.1 REGIONAL WATER QUALITY CONTROL BOARD

The California *Porter-Cologne Water Quality Control Act* gives the Regional Board very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Regional Board shares the Corps' methodology for delineating the limits of jurisdiction based on the identification of OHWM indicators and utilizing the three parameter approach for wetlands.

3.2.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq.* of the California Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. Generally, the CDFW's jurisdictional limit is not defined by a specific flow event, nor by the presence of OHWM indicators or the path of surface water as this path might vary seasonally. Instead, CDFW's jurisdictional limit is based on the topography or elevation of land that confines surface water to a definite course when the surface water rises to its highest point. Further, the CDFW's jurisdictional limit extends to include any habitat (e.g. riparian), including wetlands and vernal pools, supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. For this project location, CDFW jurisdictional limits were delineated using the methods outlined in the *MESA Field Guide* (Brady, III and Vyverberg 2013) and *A Review of Stream Processes and Forms in Dryland Watersheds* (Vyverberg 2010), which were developed to provide guidance on the methods utilized to describe and delineate episodic streams within the inland deserts region of southern California.

Section 4 Literature Review

ELMT conducted a thorough review of relevant literature and materials to preliminarily identify areas that may fall under the jurisdiction of the regulatory agencies. A summary of materials utilized during ELMT's literature review is provided below and in Appendix B. In addition, refer to Section 8 for a complete list of references used throughout the course of this delineation.

4.1 WATERSHED REVIEW

The subject property is located within the Santa Ana River Watershed (HUC 18070203). The Santa Ana River watershed is located in southern California, south and east of the City of Los Angeles. The watershed includes much of Orange County, the northwestern corner of Riverside County, the southwestern corner of San Bernardino County, and a small portion of Los Angeles County. The watershed is bounded on the south by the Santa Margarita watershed, on the east by the Salton Sea and Southern Mojave watersheds, and on the north/west by the Mojave and San Gabriel watersheds. The watershed is approximately 2,800 square miles in area.

The Santa Ana River Watershed is located in the Peninsular Ranges and Transverse Ranges Geomorphic Provinces of Southern California (California Geological Survey Note 36). The highest elevations (upper reaches) of the watershed occur in the San Bernardino Mountains (San Gorgonio Peak – 11,485 feet in elevation), eastern San Gabriel Mountains (Transverse Ranges Province; Mt. Baldy – 10,080 feet in elevation), and San Jacinto Mountains (Peninsular Ranges Province, Mt. San Jacinto – 10,804 feet in elevation). Further downstream, the Santa Ana Mountains and the Chino Hills form a topographic high before the river flows into the Coastal Plain (in Orange County) and into the Pacific Ocean. Primary slope direction is northeast to southwest, with secondary slopes controlled by local topography.

This watershed is in an arid region, and therefore has little natural perennial surface water. Surface waters start in the upper erosion zone of the watershed, primarily in the San Bernardino and San Gabriel Mountains. This upper zone has the highest gradient and soils/geology that do not allow large quantities of percolation of surface water into the ground. Flows consist mainly of snowmelt and storm runoff from the lightly developed San Bernardino National Forest; this water is generally high quality at this point. In this zone, the Santa Ana River is generally confined in its lateral movement, contained by the slope in the mountainous regions. In the upper valley, flows from the Seven Oaks Dam to the City of San Bernardino consist mainly of storm flows, flows from the San Timoteo Creek, and groundwater that is rising due to local geological conditions. From the City of San Bernardino to the City of Riverside, the river flows perennially, and it includes treated discharges from wastewater treatment plants. From the City of Riverside to the recharge basins below Imperial Highway, river flow consists of highly treated wastewater discharges, urban runoff, irrigation runoff, and groundwater forced to the surface by shallow/rising bedrock. Near Corona, the river cuts through the Santa Ana Mountains and the Puente-Chino Hills. The river then flows into the Orange County Coastal Plain; the channel lessens and the gradient decreases.

4.2 LOCAL CLIMATE

Riverside County features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in Southern California, winters are colder with frost and with chilly to cold morning temperatures common. Climatological data obtained from nearby weather stations indicates the annual precipitation averages 11.4 inches per year. Almost all of the precipitation in the form of rain occurs in the months between December and March, with hardly any occurring between the months of April and November. The wettest month is February, with a monthly average total precipitation of 2.86 inches, and the driest months are June and July, both with monthly average total precipitation of 0.04 inches. The average maximum and minimum temperatures are 81 and 47 degrees Fahrenheit (° F) respectively with July and August (monthly average high 98° F) being the hottest months and December (monthly average low 34° F) being the coldest. The temperature during the site visit was in the mid to high 90s ° F with no cloud cover overhead.

4.3 USGS TOPOGRAPHIC QUADRANGLE

The USGS 7.5 Minute Series Topographic Quadrangle maps show geological formations and their characteristics, describing the physical setting of an area through contour lines and major surface features including lakes, rivers, streams, buildings, landmarks, and other factors that may fall under an agency's jurisdiction. Additionally, the maps depict topography through color and contour lines, which are helpful in determining elevations and latitude and longitude within the subject property.

The subject property is located within the Corona South quadrangle of the USGS 7.5-minute topographic map series in an unsectioned portion of Ranch 6 west, Township 3 south. On-site surface elevation ranges from approximately 500 feet to 1,200 feet above mean sea level. The eastern portion of the subject property consists of steep terrain associated with the rolling hills. According to the topographic map, the eastern portion of the subject property consists entirely of vacant/undeveloped land, while the western portion of the subject property supports areas of urban extensions/development. In this case, the urban extensions/development are associated with mining activities. The topographic map depicts two (2) blue line streams on the subject property; one along the northern boundary paralleling Indiana Avenue, and one along the southern boundary. No evidence of these blue line stream were observed on-site during the field investigation and has been eliminated from by the mining activities. Temescal Wash is also observed on the topographic map bordering the western boundary of the subject property.

4.4 SOILS

Soils within and adjacent to the subject property were researched prior to the field delineation using the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the County list of hydric soils. Soil surveys furnish soil maps and interpretations originally needed in providing technical assistance to farmers and ranchers; in guiding other decisions about soil selection, use, and management; and in planning, research, and disseminating the results of the research. In addition, soil surveys are now heavily utilized in order to obtain soil information with respect to potential wetland environments and jurisdictional areas (i.e., soil characteristics, drainage, and color). According to

the Custom Soil Resource Report, the subject property is underlain by the following soil units: Cieneba sandy loam, 15 to 50 percent slopes - eroded, Cieneba rocky sandy loam, 15 to 50 percent - eroded, Cortina gravelly sandy loam, 0 to 2 percent slopes, Hanford coarse sandy loam, 2 to 8 percent slopes, Temescal rocky loam, 15 to 50 percent slopes - eroded, Vista coarse sandy loam, 8 to 15 percent slopes - eroded, and Vista coarse sandy loam, 15 to 35 percent - eroded.

4.5 HYDRIC SOILS LIST OF CALIFORNIA

ELMT reviewed the USDA NRCS Hydric Soils List of California in an effort to verify whether on-site soils are considered to be hydric⁵. It should be noted that lists of hydric soils along with soil survey maps provide off-site ancillary tools to assist in wetland determinations, but they are not a substitute for field investigations. According to the hydric soils list, Cortina gravelly sandy loam, 0 to 2 percent slopes was the only hydric soil listed for the Western Riverside Area.

4.6 NATIONAL WETLANDS INVENTORY

ELMT reviewed the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory maps. Within the subject property several riverine resources are documented on the eastern portion of the site, and three (3) freshwater pond resources are documented at the bottom of the mining pit. Immediately west of and outside the limits of the subject property, in association with Temescal Wash, the following have been documented: a lake (LIUBH), freshwater emergent wetland, and riverine resources. Refer to Appendix B, *Documentation*.

4.7 FLOOD ZONE

ELMT searched the Federal Emergency Management Act website for flood data for the subject property. Based on Flood Insurance Rate Map No. 06065C1360G, the majority of the subject property is located within Other Area Zone X which is defined as areas determined to be outside of the 0.2% annual chance floodplain. The western boundary of the subject property, bordering Temescal Wash, is located within Area AE which are areas where based flood elevations have been determined and Other Flood Areas Zone X which is defined as areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. Refer to Appendix B, *Documentation*.

⁵ A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Section 5 Site Conditions

ELMT biologist Travis J. McGill conducted a field delineation on July 3, 2018 to verify existing site conditions and document the extent of potential jurisdictional areas within the boundaries of the subject property. Temperatures during the site visit were in the mid to high 90s (°F) with light winds and no cloud cover. Due to the steep terrain and limited access to the eastern portion of the subject property ELMT field staff did not walk the entire length of the drainage features. Refer to Appendix C for representative photographs taken throughout the subject property.

5.1 JURISDICTIONAL FEATURES

5.1.1 DRAINAGE FEATURES

There are five (5) ephemeral/non-wetland drainage features (Drainages 1-5) on the eastern portion of the subject property located on the bottom of the canyon/ravine slopes. These drainage features are separated from the western portion of the subject property by a mountain ridge follow onsite topography from southwest to northeast before terminating at the northeastern boundary of the subject property. These drainages eventually flow into a detention basin at the bottom of the mountain ridge, just south of the existing residential developments. The detention basin flows into a concrete lined channel that eventually flows north into the Arlington Valley Channel which then flows east to west into Temescal Wash. Temescal Wash has a surface hydrologic connection into the Santa Ana River (Relatively Permanent Water) which is ultimately tributary to the Pacific Ocean (Traditional Navigable Water). Therefore, the five drainage features qualify as waters of the United States and fall under the regulatory authority of the Corps, Regional Board, and CDFW.

Drainage 1 is an unnamed, ephemeral drainage feature that measures approximately 379 linear feet in length with an average OHWM of 2 feet. Drainage 2 is an unnamed, ephemeral drainage feature that measures approximately 1,301 linear feet in length. Drainage 2 has an OHWM of 2 feet for 567 linear feet and an OHWM of 3 feet for 734 linear feet. Additionally, it should be noted that a small patch of elderberry (*Sambucus nigra*) was observed near the bottom of Drainage 2 within the subject property boundary (within the SMP boundary) that was mapped as CDFW jurisdiction. Drainage 3 is an unnamed, ephemeral drainage feature that measures approximately 516 linear feet in length with an average OHWM of 2 feet. Drainage 4 is an unnamed, ephemeral drainage feature that measures approximately 468 linear feet in length with an average OHWM of 2 feet. Drainage 5 is an unnamed, ephemeral drainage feature that measures approximately 439 linear feet in length with an average OHWM of 2 feet.

All five drainage features exhibit earthen streambeds consisting of a natural substrate with an even distribution of gravel, and sand. Evidence of an OHWM and surface hydrology was observed via the following indicators: sediment deposition, and scour. Surface flows within the five drainage features are provided by direct precipitation. Dominant plant species occurring within the drainage features include non-native grasses (*Bromus* spp.), brittlebush (*Encelia farinosa*), short-podded mustard (*Hirschfeldia incana*), and tumbleweed (*Salsola tragus*).

It should be noted that Temescal Wash borders the western boundary of the subject property. Although the wash abuts the western boundary of the subject property, the jurisdictional limits of Temescal Wash are located outside of the Projects limits of disturbance, and no impacts to Temescal Wash will occur from the proposed Project.

5.1.2 WETLAND FEATURES

In order to qualify as a wetland, a feature must exhibit all three wetland parameters (i.e., vegetation, soils, and hydrology) described in the Corps Arid West Regional Supplement. Although evidence of hydrology (i.e., scour) was present within the on-site drainage features, these areas were primarily dominated by upland upland plant species and lacked the necessary amount of hydrophytic vegetation to meet the wetland vegetation parameter. Further the drainages follow steep topographic relief, and are not expected to pond long enough to create anaerobic soil conditions. Therefore, no wetland features are anticipated to occur on the subject property.

Section 6 Findings

In accordance with the 1990 Negative Declaration, it was noted that the drainage features within the proposed expansion area (eastern portion of the site) are located within a separate drainage system from where All American Asphalt is currently permitted. The drainages within the expansion area (eastern portion) flow north into two unnamed drainage features that eventually flow north into the community of Home Gardens, while the current mining operations on the subject property are self-contained and flow west towards Temescal Wash.

The approved mitigation measures outlined in the Negative Declaration state that the applicant shall be required to ensure that all drainage within the expansion area is funneled into the current mining site once mineral extraction occurs on the eastern portion of the site. In addition, to ensure that there is no increase in sediment production entering the natural drainage system feeding north into the Home Gardens area, the applicant shall install all drainage facilities in accordance with the project phasing plan. The proposed amendment project will stay on the south/west side of the mountain ridge and is not expected to have any impacts to the eastern portion of the site.

This report presents ELMT's best effort at determining the extent of jurisdictional features using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Please refer to the following sections for a summary of jurisdictional areas within the subject property.

6.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

6.1.1 WATERS OF THE UNITED STATES DETERMINATION

Drainages 1-5 exhibit a surface hydrologic connection to the Santa Ana River (Relatively Permanent Water) and ultimately the Pacific Ocean (Traditional Navigable Water). Therefore, Drainages 1-5 qualify as waters of the United States and fall under the regulatory authority of the Corps. Approximately 0.16 acre (3,103 linear feet) of Corps jurisdiction (non-wetland waters) is located within the boundaries of the subject property. Refer to Exhibit 4, *Jurisdictional Waters*, for an illustration of Corps jurisdictional areas.

Table 1: On-Site Jurisdictional Areas

Jurisdictional Feature	Corps/Regional Board Jurisdiction Non-Wetland Waters On-Site Jurisdiction Acreage (Linear Feet)	CDFW Jurisdictional Streambed/Riparian On-Site Jurisdiction Acreage (Linear Feet)
Drainage 1	0.017 (379)	0.017 (379)
Drainage 2	0.077 (1,301)	0.177 (1,301)
Drainage 3	0.024 (516)	0.024 (516)
Drainage 4	0.021 (468)	0.021 (468)
Drainage 5	0.020 (439)	0.020 (439)
TOTAL	0.16 (3,103)	0.26 (3,103)

6.1.2 WETLAND DETERMINATION

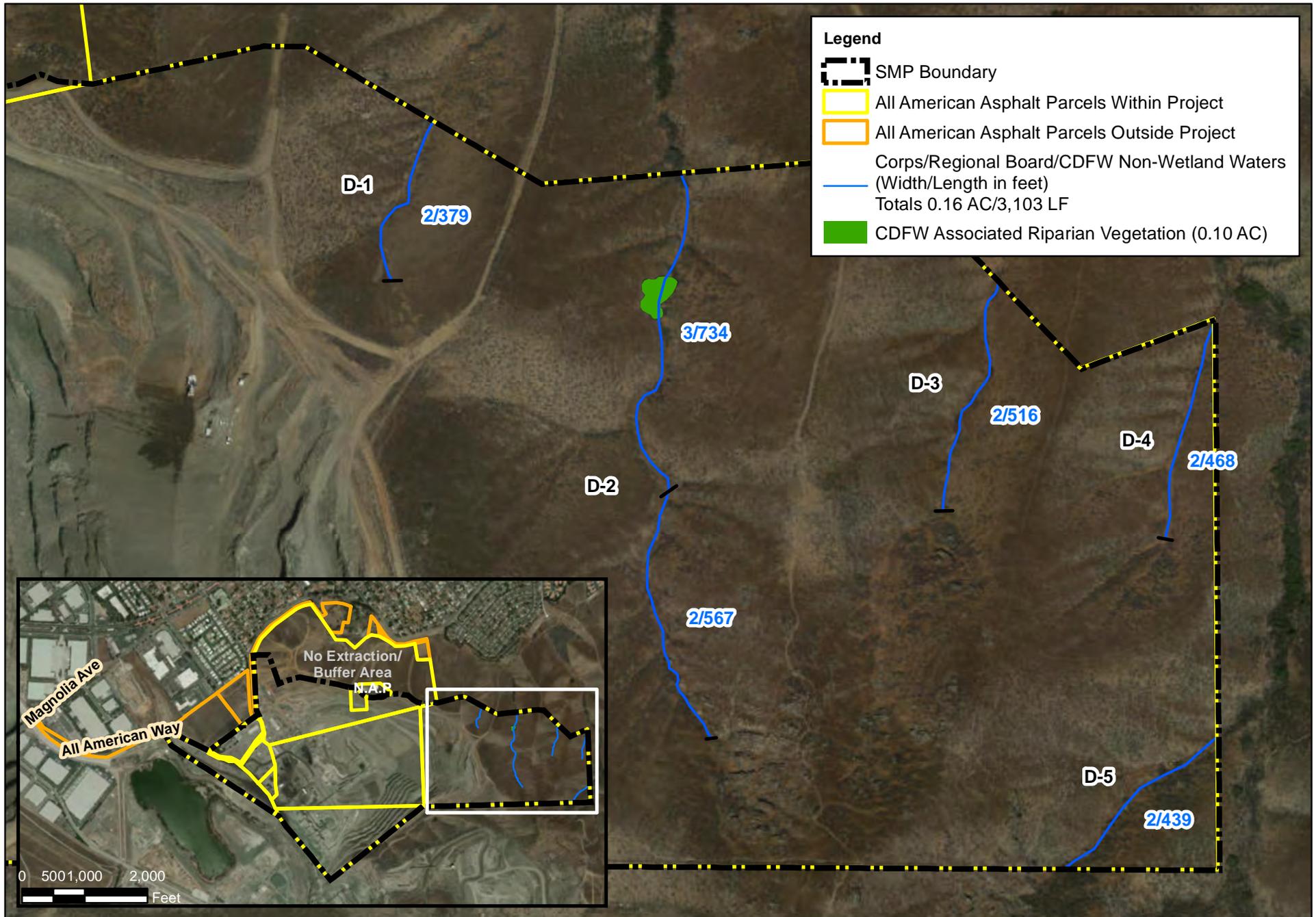
An area must exhibit all three wetland parameters described in the Corps Arid West Regional Supplement to be considered a jurisdictional wetland. Based on the results of the field delineation, it was determined that no areas within the subject property met all three wetland parameters. Therefore, no jurisdictional wetland features exist within the subject property.

6.2 REGIONAL WATER QUALITY CONTROL BOARD

No isolated or Rapanos conditions were observed within the boundaries of the subject property. Therefore, the Regional Board jurisdictional limit follows that of the Corps and totals approximately 0.16 acre (3,103 linear feet) of non-wetland waters. Refer to Exhibit 4, *Jurisdictional Waters*, for an illustration of Regional Board jurisdictional areas.

6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Drainages 1-5 exhibit characteristics consistent with CDFW's methodology and would be considered CDFW streambed/riparian totaling approximately 0.26 acres (3,103 linear feet) within boundaries of the subject property. Refer to Exhibit 4, *Jurisdictional Waters*, for an illustration of CDFW jurisdictional areas.



Legend

-  SMP Boundary
-  All American Asphalt Parcels Within Project
-  All American Asphalt Parcels Outside Project
-  Corps/Regional Board/CDFW Non-Wetland Waters (Width/Length in feet)
Totals 0.16 AC/3,103 LF
-  CDFW Associated Riparian Vegetation (0.10 AC)

ALL AMERICAN ASPHALT
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS
Jurisdictional Waters

Section 7 Regulatory Approval Process

The following is a summary of the various permits, certifications, and agreements that may be necessary prior to construction and/or alteration within jurisdictional areas. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries and permitting requirements.

7.1 U.S. ARMY CORPS OF ENGINEERS

The Corps regulates discharges of dredged or fill materials into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. Therefore, any impacts to on-site jurisdictional areas will require a CWA Section 404 permit prior to project implementation. Since the Project will result in the permanent loss of less than ½-acre of Corps jurisdiction, it is anticipated that the Project can be authorized under the Corps Nationwide Permit (NWP) program. It should be noted that the NWP program typically has a linear foot impact threshold of 300 linear feet for all intermittent and ephemeral streams. However, the Corps can waive this threshold upon request through the submission of a Section 404 pre-construction notification.

7.2 REGIONAL WATER QUALITY CONTROL BOARD

The Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. Therefore, any impacts to on-site jurisdictional areas will require a CWA Section 401 Water Quality Certification prior to project implementation. The application will require a processing fee which is based on the extent of project impacts, and the final CWA Section 401 Water Quality Certification will not be issued until all fees are paid to the Regional Board. It should also be noted that the Regional Board requires that California Environmental Quality Act (CEQA) compliance be obtained prior to issuance of the Section 401 Water Quality Certification.

7.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Pursuant to Section 1602 of the California Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream. Therefore, any impacts to the on-site jurisdictional areas will require a Section 1602 Streambed Alteration Agreement from the CDFW prior to project implementation. The notification will require a processing fee which is based on the term and cost of the proposed Project. It should also be noted that the CDFW requires that the payment of the process fee be paid and CEQA compliance be obtained prior to the issuance of the final Section 1602 Streambed Alteration Agreement.

7.4 RECOMMENDATIONS

It is recommended that this delineation be forwarded to the regulatory agencies for their review and concurrence. The concurrence/receipt would solidify findings noted within this report.

Section 8 References

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Appendix A Methodology

WATERS OF THE UNITED STATES

Since 1972, the Corps and EPA have jointly regulated the filling of waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States under Section 404 of the CWA. The Corps and EPA define “fill material” to include any “material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States.” Examples include, but are not limited to, the placement of sand, rock, clay, construction debris, wood chips, and “materials used to create any structure or infrastructure in the waters of the United States.” The term “*waters of the United States*” is defined 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 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: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce;
- (4) all impoundments of waters otherwise defined as waters of the United States under the definition;
- (5) tributaries of waters identified in paragraphs (1)-(4) mentioned above;
- (6) the territorial seas; and,
- (7) wetlands¹ adjacent to the waters identified in paragraphs (1)-(6) mentioned above.

WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008). This document is one of a series of Regional Supplements to the Corps Wetland

¹ The term *wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Delineation Manual (Corps 1987). The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these three (3) parameters. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. In the field, vegetation, soils, and evidence of hydrology are examined using the methodology listed below and documented on Corps wetland data sheets, when applicable. It should be noted that both the Regional Board and the CDFW jurisdictional wetlands encompass those of the Corps.

Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, often referred to as hydrophytic vegetation, are listed in regional publications by the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- ◆ *Tree Stratum*: Consists of woody plants 3 inches or more in diameter at breast height (DBH), regardless of height;
- ◆ *Sapling/shrub stratum*: Consists of woody plants less than 3 inches DBH, regardless of height;
- ◆ *Herb stratum*: Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,
- ◆ *Woody vines*: Consists of all woody vines, regardless of size.

The following indicator is applied per the test method below.² Hydrophytic vegetation is present if any of the indicators are satisfied.

Indicator 1 – Dominance Test

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that comprise at least 20% (also

² Although the Dominance Test is utilized in the majority of wetland delineations, other indicator tests may be employed. If one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present, then the Prevalence Test (Indicator 2) may be performed. If the plant community satisfies the Prevalence Test, then the vegetation is hydric. If the Prevalence Test fails, then the Morphological Adaptation Test may be performed, where the delineator analyzes the vegetation for potential morphological features.

known as the “50/20 rule”) of the total dominant coverage, are recorded on a wetland data sheet. Wetland indicator status in California (Region 0) is assigned to each species using the *National Wetland Plant List, version 2.4.0* (Corps 2012). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation is considered to be met. Plant indicator status categories are described below:

- ◆ *Obligate Wetland (OBL)*: Plants that almost always occur in wetlands;
- ◆ *Facultative Wetland (FACW)*: Plants that usually occur in wetlands, but may occur in non-wetlands;
- ◆ *Facultative (FAC)*: Plants that occur in wetlands and non-wetlands;
- ◆ *Facultative Upland (FACU)*: Plants that usually occur in non-wetlands, but may occur in wetlands; and,
- ◆ *Obligate Upland (UPL)*: Plants that almost never occur in wetlands.

Hydrology

Wetland hydrology indicators are presented in four (4) groups, which include:

Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

Group B – Evidence of Recent Inundation

Group B consists of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

Group C – Evidence of Recent Soil Saturation

Group C consists of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

Group D – Evidence from Other Site Conditions or Data

Group D consists of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

Soils

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper 16-20 inches.³ The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 20 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to an excavation depth of 20 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (2009). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables – hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation, iron reduction, translocation, and accumulation, and sulfate reduction, are also recorded.

Hydric soil indicators are present in three groups, which include:

All Soils

“All soils” refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

Sandy Soils

“Sandy soils” refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

³ According to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008), growing season dates are determined through on-site observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature.

Loamy and Clayey Soils

“Loamy and clayey soils” refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

SWANCC WATERS

The term “isolated waters” is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFW take jurisdiction through the application of the OHWM/streambed and/or the 3 parameter wetland methodology utilized by the Corps.

RAPANOS WATERS

The Corps will assert jurisdiction over non-navigable, not relatively permanent tributaries and their adjacent wetlands where such tributaries and wetlands have a significant nexus to a Traditional Navigable Water (TNW). The flow characteristics and functions of the tributary itself, in combination with the functions performed by any wetlands adjacent to the tributary, determine if these waters/wetlands significantly affect the chemical, physical, and biological integrity of the TNWs. Factors considered in the significant nexus evaluation include:

- (1) The consideration of hydrologic factors including, but not limited to, the following:
 - volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary
 - proximity to the TNW
 - size of the watershed average annual rainfall
 - average annual winter snow pack

- (2) The consideration of ecologic factors including, but not limited to, the following:
 - the ability for tributaries to carry pollutants and flood waters to TNWs
 - the ability of a tributary to provide aquatic habitat that supports a TNW
 - the ability of wetlands to trap and filter pollutants or store flood waters
 - maintenance of water quality

Appendix B Documentation



July 11, 2018

Wetlands

- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland |  Lake |
|  Estuarine and Marine Wetland |  Freshwater Forested/Shrub Wetland |  Other |
| |  Freshwater Pond |  Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or Floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only to landward of 500 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The horizontal datum was NAD 83 (GRS80) spheroid. Differences in datum, skewness, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
 NOAA NAD83/2
 National Geodetic Survey
 5350-3, 9202
 1315 East-West Highway
 Silver Spring, Maryland 20910-3282
 (301) 713-3342

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1994 or later.

This map may reflect more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

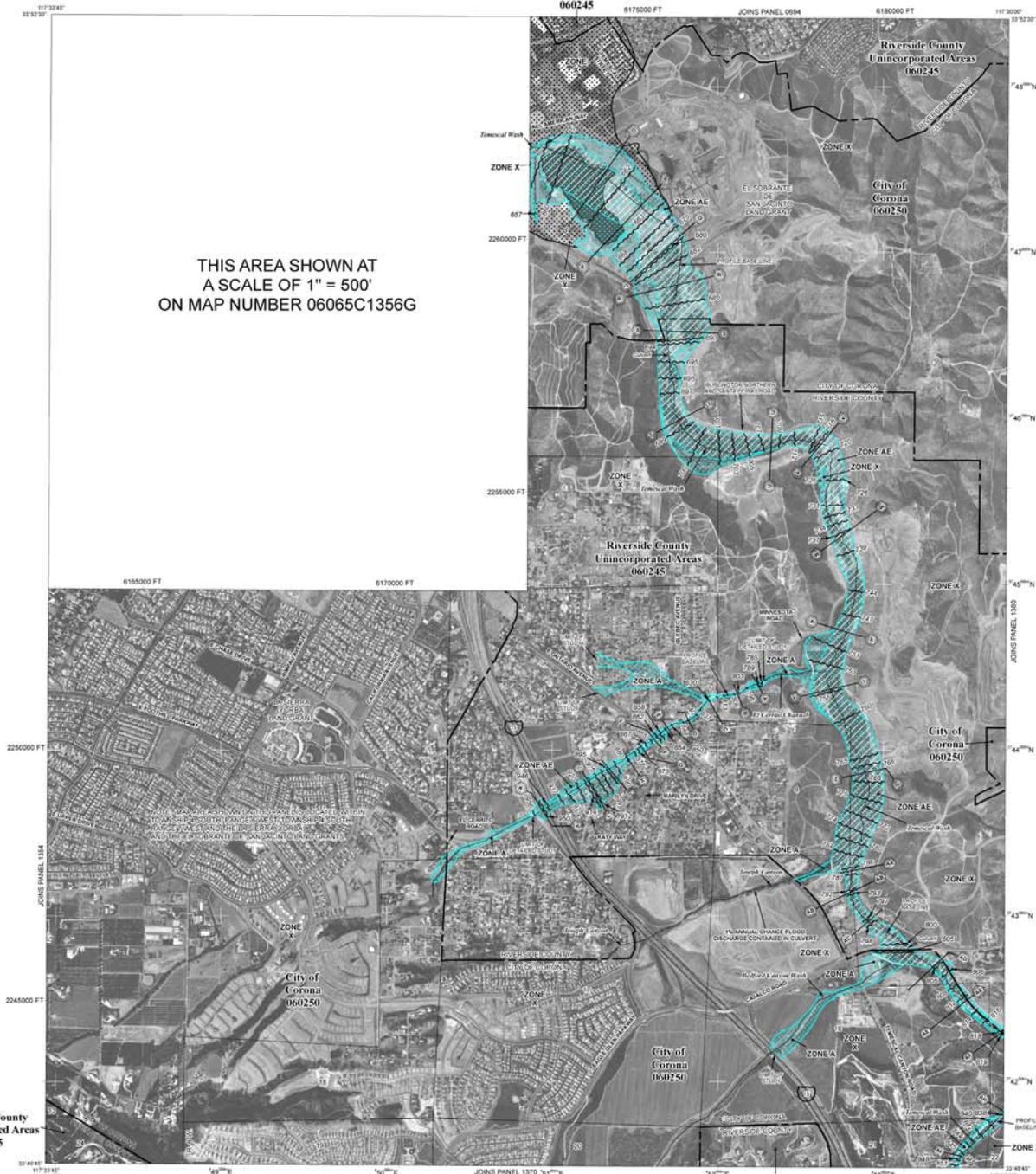
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses, and a listing of Communities table containing National Flood Insurance Program Areas for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with the FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.fema.gov>.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-HELP (1-877-336-6627) or visit the FEMA website at <http://www.fema.gov>.

THIS AREA SHOWN AT
 A SCALE OF 1" = 500'
 ON MAP NUMBER 06065C1356G

**Riverside County
 Unincorporated Areas
 060245**



LEGEND

- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**
- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow or rising terrain); average depths determined. For areas of shallow fan flooding, velocities and directions determined.
- ZONE AV** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was substantially destroyed. Zone AV indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE AVX** Area to be protected from the 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE**
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS**
- ZONE B** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with average areas less than 1 square mile, and areas protected by levees from the 1% annual chance flood.
- OTHER AREAS**
- ZONE D** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE G** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**
- OTHERWISE PROTECTED AREAS (OPAs)**
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, Flood depths or Flood velocities.
- Base Flood Elevation line and value, elevation in feet
- Base Flood Elevation value where uniform within zone; elevation in feet
- Referenced to the North American Vertical Datum of 1988
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83); meters above sea level
- 1000-meter Universal Transverse Mercator grid values, zone 11B
- 3000-foot grid lines; California State Plane coordinate system, zone 10 (FIPS/ZONE 10B), Lambert Conformal Conic projection
- Bench mark (see explanation in Notes to Users section of this FIRM)
- Base Map
- MAP REPOSITORY**
 Refer to listing of Map Repositories on Map Index
- EFFECTIVE DATE OF CELESTY/INGENIE FLOOD INSURANCE RATE MAP**
 August 28, 2008
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**
- For community map revision history prior to Countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
- To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-438-6623.

**Riverside County
 Unincorporated Areas
 060245**

**Riverside County
 Unincorporated Areas
 060245**

NFP PANEL 1360G

FIRM
FLOOD INSURANCE RATE MAP

**RIVERSIDE COUNTY,
 CALIFORNIA
 AND INCORPORATED AREAS**

PANEL 1360 OF 3805
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

COUNTY	MAPS	PANELS	TOTAL
CORONA, CITY OF	0000	100	0
RIVERSIDE COUNTY	0000	100	0

Notes to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications by the subject community.

MAP NUMBER
 06065C1360G

EFFECTIVE DATE
 AUGUST 28, 2008

Federal Emergency Management Agency

Appendix C Site Photographs



Photograph 1: Looking at the beginning of Drainage 1 on the eastern portion of the project site.



Photograph 2: Looking at the beginning of Drainage 2 on the eastern portion of the project site.



Photograph 3: Looking at the middle of Drainage 2 where it's OHWM changes from 2 to 3 feet.



Photograph 4: Looking at the small patch of elderberry near the bottom of Drainage 2 on within the subject property.



Photograph 5: Looking across the steep hills on the eastern portion of the subject property where the drainages features were observed at the bottom of the canyons/ravines.



Photograph 6: Water detention basin at the bottom of the hills, south of the residential developments that are north of the subject property.



Photograph 7: Looking south at Temescal Wash west of the subject property.



Photograph 8: Looking north at Temescal Wash west of the subject property.



Photograph 9: From the northern boundary of the excavated pit looking south.



Photograph 10: Excavated pit in the middle of the subject property.