



March 2, 2021 [Revised October 6, 2021]

Matt Englhard
Proficiency Capital LLC
11777 San Vicente Boulevard, Suite 780
Los Angeles, California 90049

SUBJECT: Jurisdictional Delineation of the Corona Clay Project Site, an Approximate 46.18-Acre Property Located in the City of Corona Sphere of Influence, Riverside County, California.

Dear Mr. Englhard:

This letter report summarizes our preliminary findings of U.S. Army Corps of Engineers (Corps) and California Department of Fish and Wildlife (CDFW) jurisdiction for the above-referenced property.¹ The approximate 46.18-acre Project site is located in the Corona Sphere of Influence [Exhibit 1] and contains portions of two blue-line drainages, Coldwater Canyon Creek and Temescal Wash, (as depicted on the U.S. Geological Survey (USGS) topographic map Lake Mathews, California [dated 1967 and photorevised in 1988]) [Exhibit 2]. The portion of Coldwater Canyon Creek, as depicted within the Project site on the USGS topographic map, was relocated and currently extends along the western boundary of the Project site. Temescal Wash traverses a small portion of the site at the northwest corner and the segment upstream of the site parallels the northern site boundary, with a limited area of offsite Temescal Wash subject to offsite impacts associated with an outfall for Coldwater Creek.

On August 20, 2019 and August 12, October 8, and November 20, 2020, and February 19, 2021 regulatory specialists of Glenn Lukos Associates, Inc. (GLA) examined the Project site and portions of Coldwater Canyon Creek upstream of the site and an offsite segment of Temescal Wash to determine the limits of (1) Corps jurisdiction pursuant to Section 404 of the Clean Water Act, and (2) CDFW jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code. Enclosed are two 450-scale maps [Exhibits 3A and 3B] that depict the areas of Corps and CDFW jurisdiction. Photographs to document the topography, vegetative communities, and general widths of each of the waters are provided as Exhibit 4.

¹ This report presents our best effort at estimating the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the regulatory agencies. Only the regulatory agencies can make a final determination of jurisdictional boundaries. If a final jurisdictional determination is required, GLA can assist in getting written confirmation of jurisdictional boundaries from the agencies.

I. SUMMARY OF FINDINGS

As summarized below, the project would result in filling of an onsite segment of Coldwater Canyon Creek, which would be realigned and relocated along the eastern site boundary. The realignment would begin offsite within an upstream segment of Coldwater Canyon Creek of which, portions would be subject to impacts and portions would be avoided but would be indirectly impacted by the loss of hydrology. The realigned segment of Coldwater Canyon Creek would discharge to Temescal Wash immediately to the north of the project site, which would result in a combination of permanent and temporary impacts to the offsite segment of Temescal Wash for construction of an outfall structure. The project would also fill a portion of Coldwater Creek offsite to the south of the project site that includes realignment of Coldwater Creek to its historic alignment.

A. Coldwater Canyon Creek

Corps jurisdiction associated with the onsite segment of Coldwater Canyon Creek totals approximately 0.50 acre and the offsite segment totals 0.67 acre, none of which consist of jurisdictional wetlands, and combined, includes approximately 3,979 linear feet of streambed.

Construction of the project will result in fill of the 0.50-acre onsite segment of Corps jurisdiction, accounting for 1,722 linear feet and would also include fill of 0.61 acre of offsite areas, accounting for 2,029 linear feet, none of which consists of wetlands.

CDFW jurisdiction associated with the onsite segment Coldwater Canyon Creek totals 1.22 acres and the offsite segment totals 2.35 acres of which 0.14 acre consists of riparian habitat and combined includes approximately 3,979 linear feet of streambed.

Construction of the project will result in fill of the 1.22-acres of CDFW jurisdiction onsite, accounting for 1,722 linear feet and would also include fill of 2.17 acres of offsite areas, including 0.14 acre of riparian habitat accounting for 2,030 linear feet.

B. Temescal Wash

Corps jurisdiction associated with the onsite segment of Temescal Wash totals approximately 0.60 acre, with areas of Temescal Wash upstream of the segment located offsite. Construction will not impact the onsite segment of Corps jurisdiction associated with Temescal Wash. A limited area of Temescal Wash occurs offsite that will be subject to impacts for construction of an outfall for Coldwater Canyon Creek that will be realigned and include the new Temescal Wash discharge location. Permanent impacts to intermittent streambed total 0.16 acre and temporary impacts to intermittent streambed also total 0.16 acre.

CDFW jurisdiction associated with the onsite segment of Temescal Wash totals approximately 1.02 acre, with areas of Temescal Wash upstream of the segment located offsite. Construction will not impact the onsite segment of Corps jurisdiction associated with Temescal Wash. A limited area of Temescal Wash occurs offsite that will be subject to impacts for construction of the outfall for Coldwater Canyon Creek that will be realigned and include the new Temescal Wash discharge location. Permanent offsite impacts to Temescal Wash, will total 0.39 acre of which 0.25 acre consists of vegetated riparian habitat. Temporary impacts will total 0.23 acre of which 0.15 acre consists of vegetated riparian habitat.

II. METHODOLOGY

Prior to beginning the field-delineation a color aerial photograph, a topographic base map of the property, and the previously cited USGS topographic map were examined to determine the locations of potential areas of Corps/CDFW jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats on the site were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual² (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Supplement (Arid West Supplement)³. While in the field the limits of Corps and CDFW jurisdiction were recorded using sub-meter GPS technology.

II. JURISDICTION

A. Army Corps of Engineers

Pursuant to Section 404 of the Clean Water Act, the Corps regulates the discharge of dredged and/or fill material into waters of the United States. The term "waters of the United States" is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- (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;*

² Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

³ U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

- (3) *All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect 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 shell fish 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 (a) (1)-(4) of this section;*
- (6) *The territorial seas;*
- (7) *Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section.*

In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the Ordinary High Water Mark (OHWM) which is defined at 33 CFR 328.3(e) as:

...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as 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.

1. Wetland Definition Pursuant to Section 404 of the Clean Water Act

The term “wetlands” (a subset of “waters of the United States”) is defined at 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions.” In 1987 the Corps published a manual to guide its field personnel in determining jurisdictional wetland boundaries. The methodology set forth in the 1987 Wetland Delineation Manual and the Arid West Supplement generally require that, in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual and Supplement provide great detail in methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria:

- more than 50 percent of the dominant plant species at the site must be typical of wetlands (i.e., rated as facultative or wetter in the Arid West 2016 Regional Wetland Plant List⁴⁵);
- soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., a gleyed color, or mottles with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions); and
- Whereas the 1987 Manual requires that hydrologic characteristics indicate that the ground is saturated to within 12 inches of the surface for at least five percent of the growing season during a normal rainfall year, the Arid West Supplement does not include quantitative criteria with the exception for areas with “problematic hydrophytic vegetation”, which require a minimum of 14 days of ponding to be considered a wetland.

B. Regional Water Quality Control Board

The State Water Resource Control Board and each of its nine Regional Boards regulate the discharge of waste (dredged or fill material) into waters of the United States⁶ and waters of the State. Waters of the United States are defined above in Section II.A and waters of the State are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code 13050[e]).

Section 401 of the CWA requires certification for any federal permit or license authorizing impacts to waters of the U.S. (i.e., waters that are within federal jurisdiction), such as Section 404 of the CWA and Section 10 of the Safe Rivers and Harbors Act, to ensure that the impacts do not violate state water quality standards. When a project could impact waters outside of federal jurisdiction, the Regional Board has the authority under the Porter-Cologne Water

⁴ Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. Arid West 2016 Regional Wetland Plant List. Phytoneuron 2016-30: 1-17. Published 28 April 2016.

⁵ Note the Corps also publishes a National List of Plant Species that Occur in Wetlands (Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016.); however, the Regional Wetland Plant List should be used for wetland delineations within the Arid West Region.

⁶ Therefore, wetlands that meet the current definition, or any historic definition, of waters of the U.S. are waters of the state. In 2000, the State Water Resources Control Board determined that all waters of the U.S. are also waters of the state by regulation, prior to any regulatory or judicial limitations on the federal definition of waters of the U.S. (California Code of Regulations title 23, section 3831(w)). This regulation has remained in effect despite subsequent changes to the federal definition. Therefore, waters of the state includes features that have been determined by the U.S. Environmental Protection Agency (U.S. EPA) or the U.S. Army Corps of Engineers (Corps) to be “waters of the U.S.” in an approved jurisdictional determination; “waters of the U.S.” identified in an aquatic resource report verified by the Corps upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of “waters of the U.S.” or any current or historic federal regulation defining “waters of the U.S.” under the federal Clean Water Act.

Quality Control Act to issue Waste Discharge Requirements (WDRs) to ensure that impacts do not violate state water quality standards. Clean Water Act Section 401 Water Quality Certifications, WDRs, and waivers of WDRs are also referred to as orders or permits.

1. State Wetland Definition

The State Board Wetland Definition and Procedures define an area as wetland as follows: *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

The following wetlands are waters of the State:

1. *Natural wetlands;*
2. *Wetlands created by modification of a surface water of the state;⁷ and*
3. *Artificial wetlands⁸ that meet any of the following criteria:*
 - a. *Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;*
 - b. *Specifically identified in a water quality control plan as a wetland or other water of the state;*
 - c. *Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or*
 - d. *Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):*
 - i. *Industrial or municipal wastewater treatment or disposal,*
 - ii. *Settling of sediment,*
 - iii. *Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,*

⁷ “Created by modification of a surface water of the state” means that the wetland that is being evaluated was created by modifying an area that was a surface water of the state at the time of such modification. It does not include a wetland that is created in a location where a water of the state had existed historically but had already been completely eliminated at some time prior to the creation of the wetland. The wetland being evaluated does not become a water of the state due solely to a diversion of water from a different water of the state.

⁸ Artificial wetlands are wetlands that result from human activity.

- iv. Treatment of surface waters,*
- v. Agricultural crop irrigation or stock watering,*
- vi. Fire suppression,*
- vii. Industrial processing or cooling,*
- viii. Active surface mining – even if the site is managed for interim wetlands functions and values,*
- ix. Log storage,*
- x. Treatment, storage, or distribution of recycled water, or*
- xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or*
- xii. Fields flooded for rice growing.*

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

C. California Department of Fish and Wildlife

Pursuant to Division 2, Chapter 6, Sections 1600-1603 of the California Fish and Game Code, the CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake, which supports fish or wildlife.

The Fish and Game Code defines a stream (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." CDFW also defines a stream as "a body of water that 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 or biological indicators." It is important to note that the Fish and Game Code defines fish and wildlife to include: all wild animals, birds, plants, fish, amphibians, invertebrates, reptiles, and related ecological communities including the habitat upon which they depend for continued viability (FGC Division 5, Chapter 1, section 45 and Division 2, Chapter 1 section 711.2(a) respectively). Furthermore, Division 2, Chapter 5, Article 6, Section 1600 et seq. of the California Fish and Game Code does not limit jurisdiction to areas defined by specific flow events, seasonal changes in water flow, or presence/absence of vegetation types or communities.

III. RESULTS

A. Corps Jurisdiction

Corps jurisdiction within the Project site is associated with two intermittent drainages, Temescal Wash and Coldwater Canyon Creek. A limited portion of Temescal Wash traverses the northwestern corner of the Project site and an additional segment of Temescal Wash parallels the northern project boundary and is discussed below. Coldwater Canyon Creek traverses the western boundary of the Project site, and is tributary to Temescal Wash. Historically, Coldwater Canyon Creek extended across the middle portion of the Project site and was subsequently diverted into an earthen channel that extends along the western site boundary. The discussion of Coldwater Canyon Creek includes offsite areas to the south of the project site that would be subject to impacts associated with widening of Temescal Canyon Road.

1. Coldwater Canyon Creek

Coldwater Canyon Creek within the Project site totals approximately 0.50 acres of non-wetland, intermittent waters of the U.S. Coldwater Canyon Creek extends along the western boundary of the site for approximately 1,722 linear feet before discharging offsite beneath Dawson Canyon Road through two 7 by 14-foot concrete box culverts. Coldwater Canyon Creek ultimately discharges to the northwest of the Project site into Temescal Wash. The upstream and offsite segment accounts for 0.67 acre of non-wetland intermittent waters.

Coldwater Canyon Creek exhibits an OHWM ranging from 10 to 18 feet in width and was indicated by the presence of a defined channel with algal mats, debris wrack, and shelving and terracing [Exhibit 4, Photographs 1 – 2]. Vegetation associated with the creek bank and channel consists of native and non-native species, including: scale broom (*Lepidospartum squamatum*, FACU), brittlebush (*Encelia farinosa*, UPL), mugwort (*Artemisia douglasiana*, FAC), stinkweed (*Dittrichia graveolens*, UPL), oleander (*Nerium oleander*, UPL), castor bean (*Ricinus communis*, FACU), poison oak (*Toxicodendron diversilobum*, FACU), salt cedar (*Tamarix*, FAC), tarragon (*Artemisia dracunculoides*, UPL), sweetbush (*Bebbia juncea*, UPL), mulefat (*Baccharis salicifolia*, FAC), a canopy of blue-gum eucalyptus (*Eucalyptus globulus*, UPL), California sagebrush (*Artemisia californica*, UPL), and a few scattered black willow (*Salix gooddingii*, FACW) individuals.

2. Temescal Wash

The northwestern corner of the Project site is traversed by a segment of Temescal Wash which totals approximately 0.60 acre of non-wetland, intermittent waters of the U.S. The channel consists of finer substrates mixed with gravel and cobble. Vegetation along the channel includes giant reed (*Arundo donax*, FACW), scale broom (*Lepidospartum squamatum*, FACU),

brittlebush (*Encelia farinosa*, UPL), mugwort (*Artemisia douglasiana*, FAC), stinkweed (*Dittrichia graveolens*, UPL), oleander (*Nerium oleander*, UPL), castor bean (*Ricinus communis*, FACU), poison oak (*Toxicodendron diversilobum*, FACU), salt cedar (*Tamarix*, FAC), tarragon (*Artemisia dracuncululus*, UPL), sweetbush (*Bebbia juncea*, UPL), mulefat (*Baccharis salicifolia*, FAC). The OHWM associated with this segment of Temescal Wash averages approximately 33 feet in width.

Before reaching the northwest corner of the site where the site is traversed by Temescal Wash, Temescal Wash parallels the northern project boundary of the site, remaining offsite. As a component of the Project, Coldwater Creek will be realigned and will discharge to Temescal Wash offsite near the Northeast corner of the site. The area where Coldwater Creek will discharge to the site includes a well-defined low-flow channel and a terrace which is well above the low-flow channel, with a steep slope to the top of the Temescal Wash Bank. The low-flow channel is unvegetated with an algal mat and areas with adjacent mulefat scrub dominated by mulefat (*Baccharis salicifolia*, FAC) and Goodding's black willow forest dominated by Goodding's black willow (*Salix gooddingii*, FACW) and red willow (*Salix laevigata*, FACW) in the canopy with mulefat in the understory [Exhibit 4, Photographs 3 and 4]. Terraces above the low flow channel support areas of sparse alluvial scrub dominated by sweetbush (*Bebbia juncea*, UPL), mulefat (*Baccharis salicifolia*, FAC), and scale broom (*Lepidospartum squamatum*, FACU).

3. Non-Jurisdictional Drainage Ditch

The site contains a man-made drainage swale that was used to capture drainage as part of the mining operation, that extends along the eastern and southeastern boundaries of the Project site. Vegetation associated with the drainage swale include tocalote (*Centaurea melitensis*, UPL), summer mustard (*Hirschfeldia incana*, UPL), annual fescue (*Festuca myuros*, FACU), scale broom (*Lepidospartum squamatum*, FACU), salt cedar (*Tamarix ramosissima*, FAC), one black willow, slender wild oat (*Avena barbata*), and soft brome (*Bromus hordeaceus*, FACU). The drainage swale was excavated on dry land and drains primarily uplands; and as such, it is excluded from the definition of WOTUS.

B. CDFW Jurisdiction

CDFW jurisdiction is associated with Coldwater Canyon Creek and Temescal Wash described above and is summarized by site-specific descriptions outlined below. CDFW jurisdiction includes all areas of Corps jurisdiction and extend beyond the OHWM to the top of bank or canopy of associated riparian habitat.

1. Coldwater Canyon Creek

Coldwater Canyon Creek within the Project site totals approximately 1.22 acres of CDFW jurisdiction, none of which consists of riparian habitat with the exception of a few scattered black willows and a few individuals of mulefat (*Baccharis salicifolia*). Coldwater Canyon Creek traverses along the western boundary of the site for approximately 1,722 linear feet before it extends offsite beneath Dawson Canyon Road through two 7 x 14-foot concrete box culverts. Coldwater Canyon Creek discharges northwest of the Project site into Temescal Wash. The upstream offsite segment accounts for 2.35 acres, of which 0.14 acre consists of riparian habitat and extends from upstream of the site at the I-15 Freeway to the property boundary totaling 2,258 linear feet.

Coldwater Canyon Creek, both onsite and offsite, exhibits a well-defined channel and signs of intermittent flow with top of bank ranging from 12 to 51 feet in width [Exhibit 4, Photographs 1 – 2]. Vegetation associated with the creek bottom and lower portions of the bank include native and non-native species, including: scale broom (*Lepidospartum squamatum*), brittlebush (*Encelia farinosa*), mugwort (*Artemisia vulgaris*), stinkweed (*Dittrichia graveolens*), oleander (*Nerium oleander*), castor bean (*Ricinus communis*), poison oak (*Toxicodendron diversilobum*), salt cedar (*Tamarix*), tarragon (*Artemisia dracuncululus*), sweetbush (*Bebbia juncea*), mulefat (*Baccharis salicifolia*), a canopy of blue-gum eucalyptus (*Eucalyptus globulus*), California sagebrush (*Artemisia californica*), and a few scattered black willow (*Salix gooddingii*) individuals. The top bank supports upland scrub species including sweet bush, scalebroom, California sage brush and California buckwheat.

2. Temescal Wash

The northwestern corner of the Project site is traversed by segment of Temescal Wash which totals approximately 1.02 acre of CDFW jurisdictional streambed that includes a low-flow channel, and adjacent areas that exhibit occasional flows. Thus, the area of CDFW jurisdiction associated with Temescal Wash averages approximately 228 feet in width. Vegetation along the channel includes giant reed, scale broom, brittlebush, stinkweed (*Dittrichia graveolens*, UPL), castor bean (*Ricinus communis*, FACU), salt cedar (*Tamarix*, FAC), tarragon (*Artemisia dracuncululus*, UPL), sweetbush (*Bebbia juncea*, UPL), and mulefat (*Baccharis salicifolia*, FAC).

Before reaching the northwest corner of the site where the site is traversed by Temescal Wash, Temescal Wash parallels the northern project boundary of the site, remaining offsite. As a component of the Project, Coldwater Creek will be realigned and will discharge to Temescal Wash offsite near the Northeast corner of the site.

As noted above, the area where Coldwater Creek will discharge to the site includes a well-defined low-flow channel and a terrace which is well above the low-flow channel, with a steep

slope to the top of the Temescal Wash Bank. The low-flow channel is unvegetated with an algal mat and areas with adjacent mulefat scrub dominated by mulefat (*Baccharis salicifolia*, FAC) and Goodding's black willow forest dominated by Goodding's black willow (*Salix gooddingii*, FACW) and red willow (*Salix laevigata*, FACW) in the canopy with mulefat in the understory [Exhibit 4, Photographs 3 and 4]. Two large Fremont cottonwood trees (*Populus fremontii*, FAC) are growing from the toe of the steep slope.

IV. IMPACTS

Construction of the project would result to permanent and temporary impacts to Corps and CDFW jurisdiction. Tables 1 and 2 below summarize the total jurisdiction and impacts to each jurisdiction. Exhibits 5A and 5B depict the project impacts and Exhibits 6A and 6B depict the project impacts to Temescal Wash and includes the vegetation alliances.

A. Coldwater Canyon Creek

Construction of the project will result in fill of the 0.50-acre onsite segment of Corps jurisdiction, accounting for 1,722 linear feet and would also include fill of 0.61 acre of offsite areas, accounting for 2,029 linear feet, none of which consists of wetlands.

Construction of the project will result in fill of the 1.22-acres of CDFW jurisdiction onsite, accounting for 1,722 linear feet and would also include fill of 2.17 acres of offsite areas, including 0.14 acre of riparian habitat accounting for 2,030 linear feet.

B. Temescal Wash

A limited area of Temescal Wash occurs offsite that will be subject to impacts for construction of an outfall for Coldwater Canyon Creek that will be realigned and include the new Temescal Wash discharge location. Construction of the outfall would result in permanent impacts to 0.16 acre of Corps jurisdiction, none of which consists of wetlands and 0.16-acre of temporary impacts to Corps jurisdiction, none of which consist of wetlands.

Table 1 - Corps Jurisdiction: Impacts and Avoidance					
Drainage	Type	Location	Total (acres/linear feet)	Temporary Impact (acres/linear feet)	Permanent Impact (acres/linear feet)
Coldwater Canyon Creek					
Coldwater Canyon Creek	Non-Wetland Intermittent	Onsite	0.50/1,722	0.00	0.50/1,722
Coldwater Canyon Creek	Non-Wetland Intermittent	Offsite	0.67/2,258	0.00	0.61/2,029
Temescal Wash					
Temescal Wash	Non-Wetland Intermittent	Onsite	0.60/279	0.0/0.0	0.0/0.0
Temescal Wash	Non-Wetland Intermittent	Offsite	0.32/310	0.16/310	0.16/274
Total				0.16	1.27

A limited area of Temescal Wash occurs offsite that will be subject to impacts for construction of an outfall for Coldwater Canyon Creek that will be realigned and include the new Temescal Wash discharge location. Construction of the outfall would result in permanent impacts to 0.39 acre of CDFW jurisdiction, of which 0.25 acre consists of vegetated riparian habitat and 0.23 acre of temporary impacts, of which consist 0.15 acre consists of vegetated riparian habitat. A breakdown of the riparian habitat alliances in Temescal Wash is provided in Table 2 below.

Table 2 - CDFW Jurisdiction: Impacts and Avoidance					
Drainage	Type	Location	Total (Acres)	Temporary Impact (Acres)	Permanent Impact (Acres)
Coldwater Canyon Creek					
Coldwater Canyon Creek	Non-Riparian Intermittent	Onsite	1.22	0.00	1.22

Coldwater Canyon Creek	Non-Riparian Intermittent	Offsite	2.21	0.00	2.03
Coldwater Canyon Creek	Riparian Intermittent	Offsite	0.14	0.00	0.14
Coldwater Canyon Creek Total			3.57	0.00	3.39
Temescal Wash					
Temescal Wash	Non-Riparian Intermittent	Onsite	1.02	0.0	0.0
Temescal Wash	Non-Riparian Intermittent	Offsite	0.22	0.08	0.14
Temescal Wash	Intermittent – Alluvial Scrub	Offsite	0.13	0.05	0.08
Temescal Wash	Intermittent – Black Willow	Offsite	0.17	0.08	0.09
Temescal Wash	Intermittent – Cottonwood	Offsite	0.07	0.0	0.07
Temescal Wash	Intermittent – Mulefat Scrub	Offsite	0.03	0.02	0.01
Temescal Total			1.64	0.23	0.39

V. MITIGATION

As summarized in the permanent impact section above, impacts to CDFW jurisdiction exceeds impacts to Corps jurisdiction and any project mitigation necessary to satisfy the requirements of CDFW would also satisfy the requirement of the Corps and Regional Board.

In summary, impacts to CDFW jurisdiction includes permanent impacts:

- 3.39 acres of the Coldwater Canyon Creek Channel of which
 - 3.25 acres consist of non-riparian intermittent streambed
 - 0.02 acre of mulefat scrub and 0.12 acre of black willow individuals
- 0.39 acre of Temescal Wash of which
 - 0.14 acre consists of unvegetated intermittent channel or coastal sage scrub
 - 0.25 acre consists of riparian habitat

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and temporary impact:

- 0.23 acre of Temescal Wash of which:
 - 0.08 acre consists of unvegetated intermittent channel or coastal sage scrub
 - 0.15 acre consists of riparian habitat.

Mitigation for permanent impacts would be mitigated at a ratio of 2:1 through purchase of credits in an approved mitigation bank such as the Riverpark Mitigation Bank totaling 8.02 acres.

Mitigation for temporary impacts would be mitigated through recontouring following construction, reestablishment of onsite habitat on a 1:1 on-kind basis for each vegetation alliance removed. In addition, to compensate for temporal loss purchase of credits at a ratio of 1:1 at the Riverpark Mitigation Bank would also be included.

If you have any questions about this letter report, please contact Tony Bomkamp at (949) 340-7333.

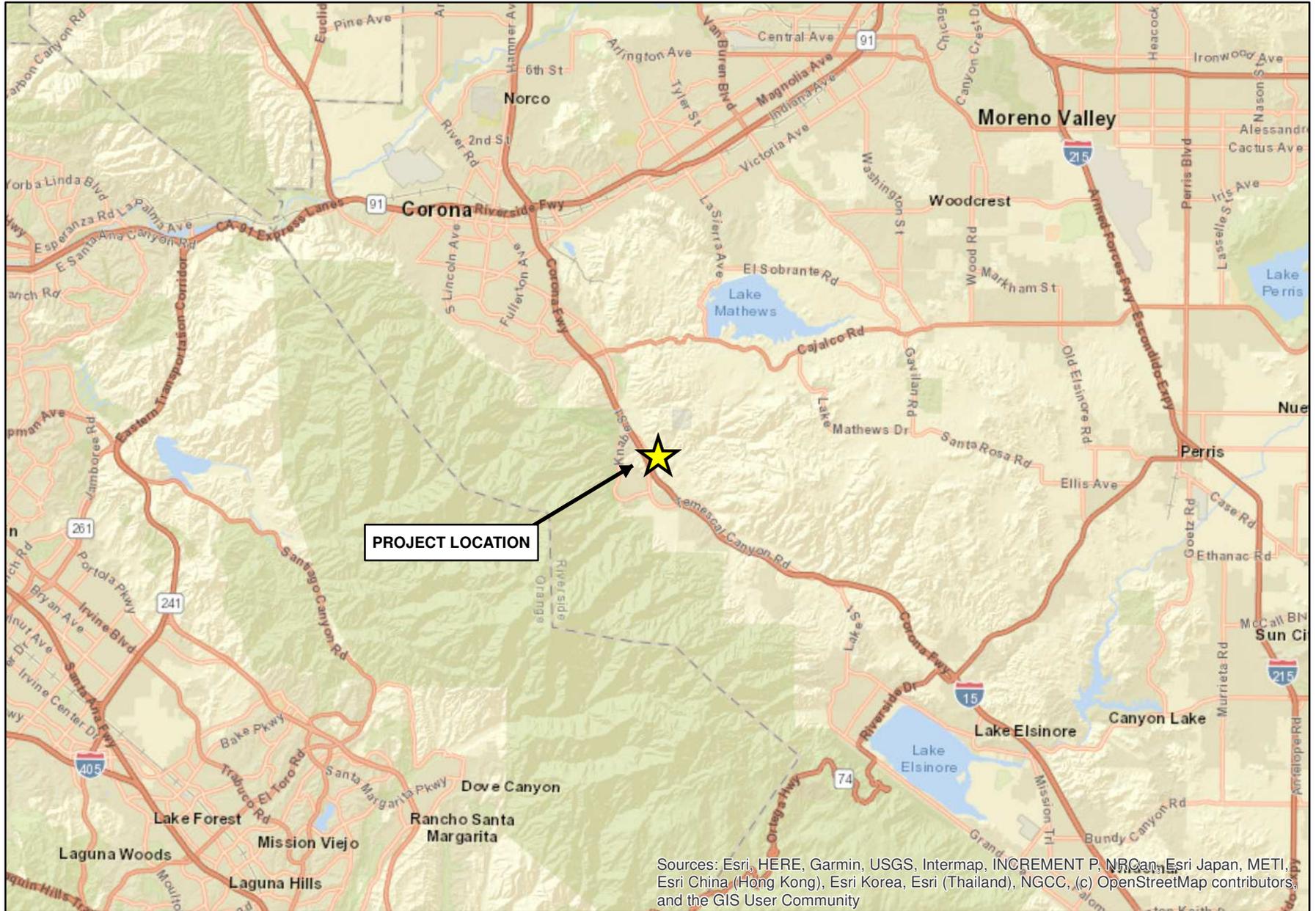
Sincerely,

GLENN LUKOS ASSOCIATES, INC.



Tony Bomkamp
Regulatory Specialist

Source: ESRI World Street Map



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

TEMESCAL & DAWSON CANYON ROAD WAREHOUSE PROJECT SITE

Regional Map

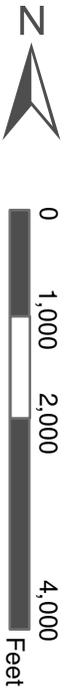
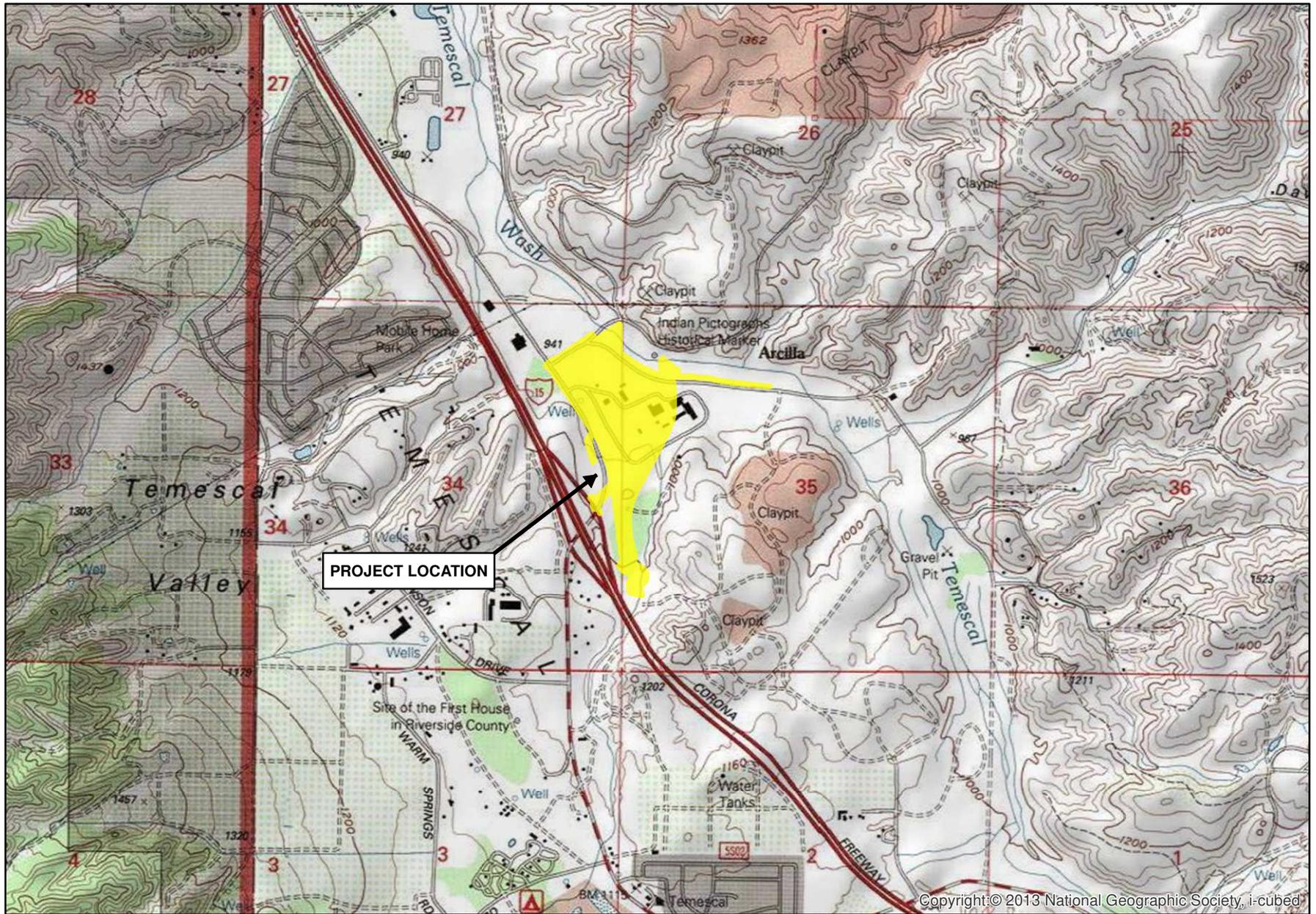
GLENN LUKOS ASSOCIATES



Exhibit 1

N
0
2
4
8
Miles

Adapted from USGS Lake Mathews, CA quadrangle



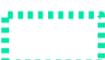
**TEMESCAL & DAWSON CANYON
ROAD WAREHOUSE PROJECT SITE**
Vicinity Map

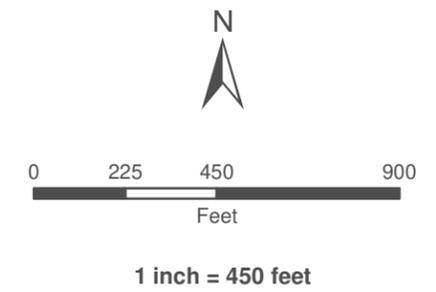
GLENN LUKOS ASSOCIATES



Exhibit 2



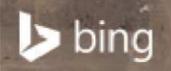
-  Project Site
-  Proposed Channel
-  Permanent Offsite Impacts
-  Permanent Offsite Impacts (from Adjacent Project)
-  Temporary Offsite Impacts
-  Non-Wetland Waters
-  12 Width of Drainage in Feet

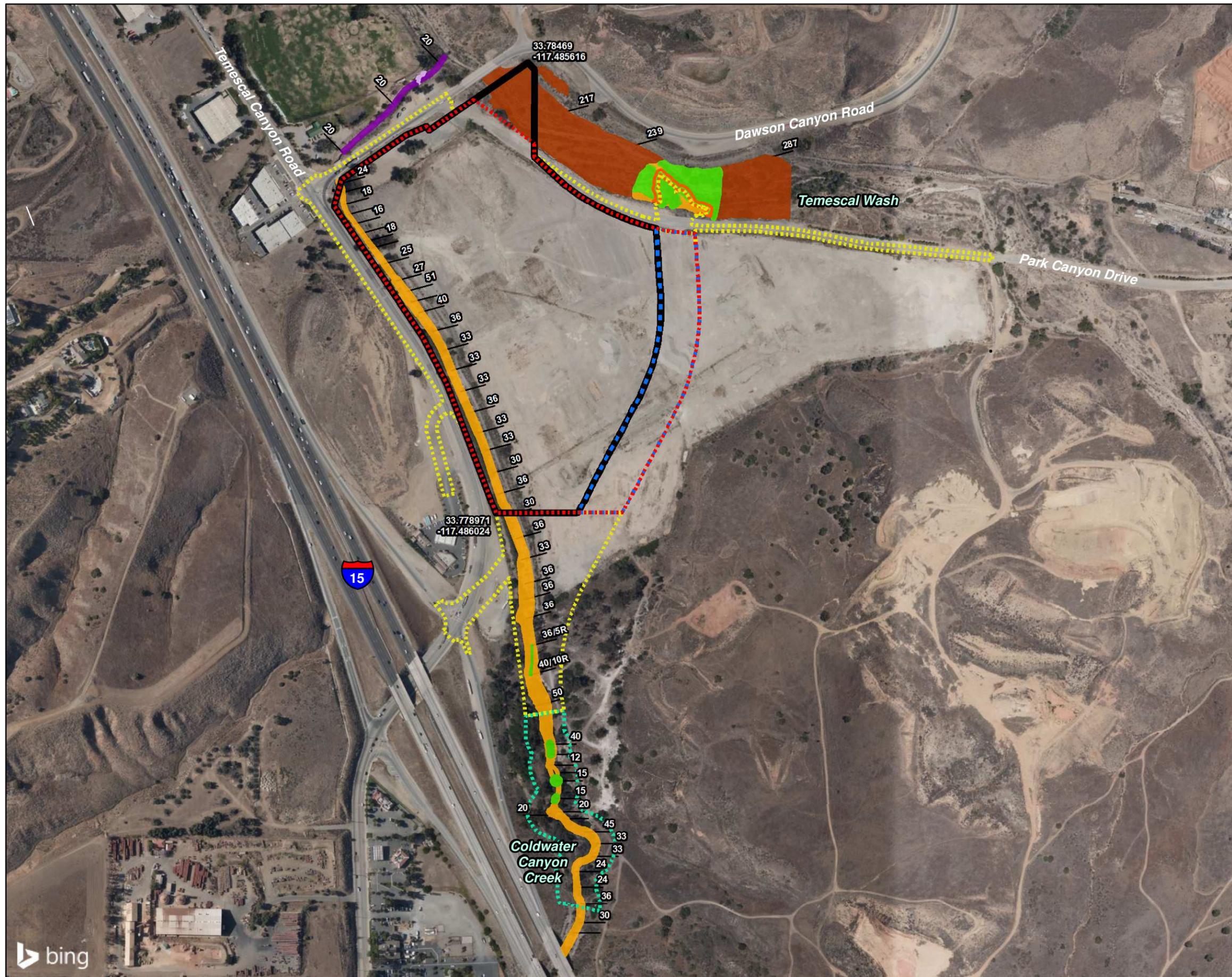


Coordinate System: State Plane 6 NAD 83
 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: B. Gale, GLA
 Date Prepared: March 2, 2021

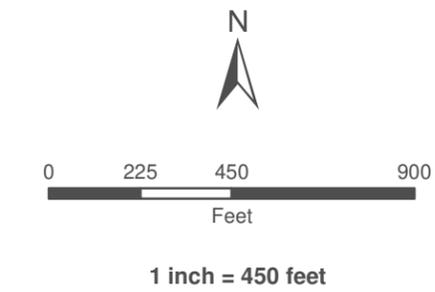
TEMESCAL & DAWSON CANYON ROAD WAREHOUSE PROJECT SITE
 Corps Jurisdictional Delineation Map

GLENN LUKOS ASSOCIATES 
 Exhibit 3A





-  Project Site
-  Proposed Channel
-  Permanent Onsite Impacts
-  Permanent Offsite Impacts
-  Permanent Offsite Impacts (from Adjacent Project)
-  Temporary Offsite Impacts
-  Riparian
-  Non-Riparian Streambed
-  CDFW Jurisdiction (Vegetation Not Mapped)
-  Offsite Hydrology Reduction (Riparian)
-  Offsite Hydrology Reduction (Non-Riparian Streambed)
-  12 Width of Drainage in Feet

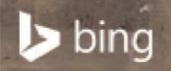


Coordinate System: State Plane 6 NAD 83
 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: B. Gale, GLA
 Date Prepared: October 6, 2021

TEMESCAL & DAWSON CANYON ROAD WAREHOUSE PROJECT SITE
 CDFW Jurisdictional Delineation Map
 with Offsite Hydrology Reduction

GLENN LUKOS ASSOCIATES 

Exhibit 3B





Photograph 1: Coldwater Creek looking downstream from project southern boundary showing unvegetated channel and banks with upland vegetation.



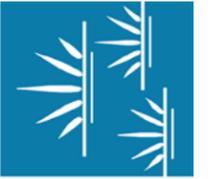
Photograph 2: Coldwater Creek looking downstream near northern project boundary showing unvegetated channel and banks with upland vegetation.

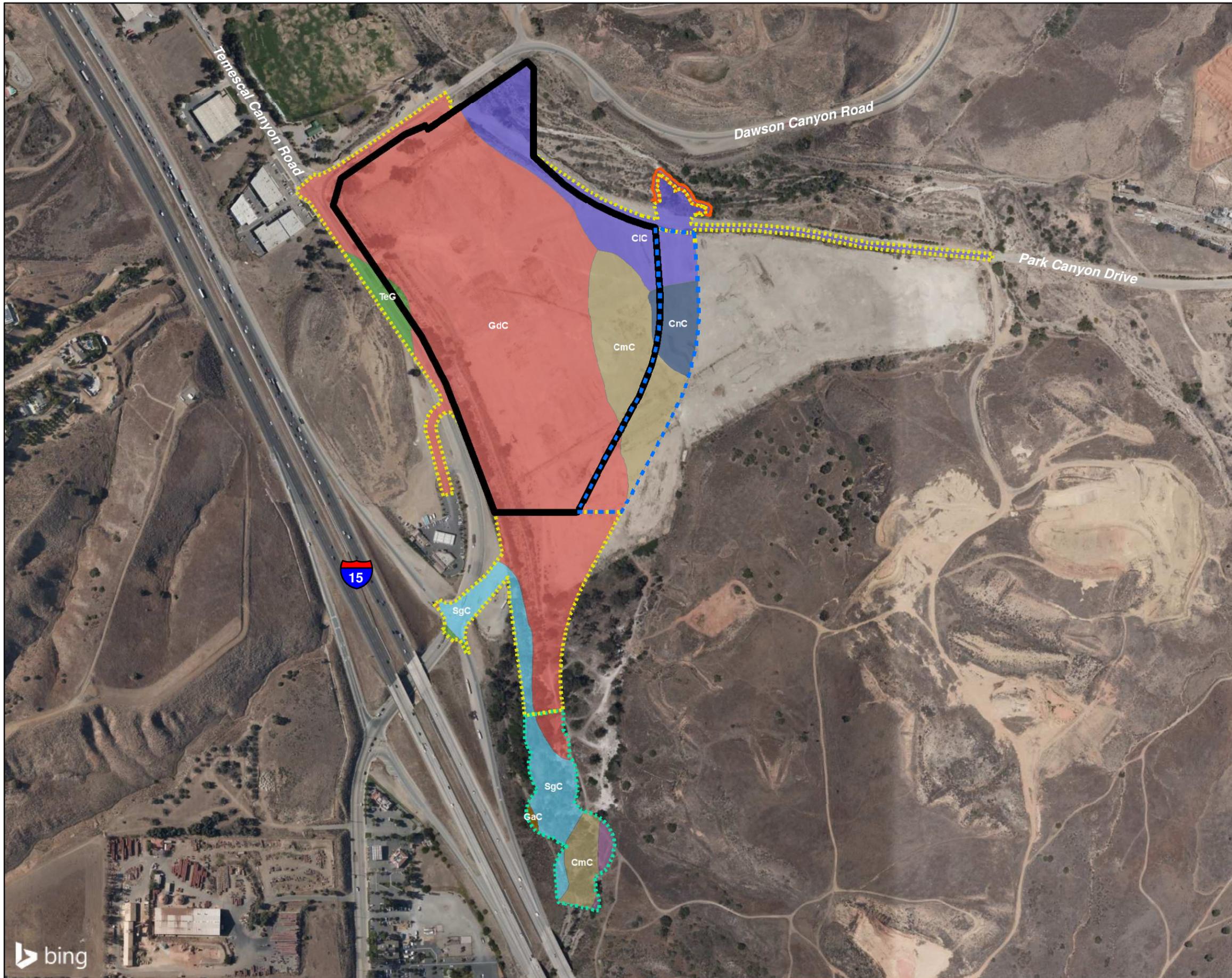


Photograph 3: Temescal Wash looking upstream from northern boundary of offsite impact areas showing stream channel and associated scrub vegetation.

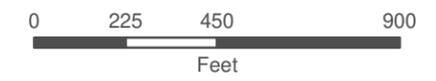


Photograph 4: Temescal wash looking upstream at black willow forest to be partially impacted by offsite outfall construction.





-  Project Site
-  Proposed Channel
-  Permanent Offsite Impacts
-  Permanent Offsite Impacts (from Adjacent Project)
-  Temporary Offsite Impacts
-  AIC Arbuckle gravelly loam, 2 to 8 percent slopes
-  CIC Cortina gravelly loamy sand, 2 to 8 percent slopes
-  CmC Cortina cobbly loamy sand, 2 to 8 percent slopes
-  CnC Cortina gravelly coarse sandy loam, 2 to 8 percent slopes
-  GaC Garretson very fine sandy loam, 2 to 8 percent slopes
-  GdC Garretson gravelly very fine sandy loam, 2 to 8 percent slopes
-  SgC San Emigdio loam, 2 to 8 percent slopes
-  TeG Terrace escarpments



1 inch = 450 feet



Coordinate System: State Plane 6 NAD 83
 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: B. Gale, GLA
 Date Prepared: March 2, 2021

TEMESCAL & DAWSON CANYON ROAD WAREHOUSE PROJECT SITE
 Soils Map

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