Aquatic Resources Delineation Survey Report of an Approximately 32.2-Acre Property at Apple Valley, San Bernardino County, California

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Aquatic Resources Delineation for the Navajo Road 32.2-Acre Project

SUMMARY

This report documents the results of an aquatic resources delineation conducted by ECORP for an approximately 32.2-acre undeveloped property within the Town of Apple Valley, California. The site is bounded by Sandia Road to the south and Navajo Road to the east. The delineation was conducted to identify features on the property jurisdictional to U.S. Army Corps of Engineers (USACE) or State Water Resources Control Board (SWRCB) under the federal Clean Water Act (CWA), or California Department of Fish and Wildlife (CDFW) under the California Fish and Game Code (Section 1602). The delineation study consisted of a literature review followed by a field survey of the site.

Currently, the property contains natural habitat consisting of non-native grassland and scattered desert scrub. There are no developments on the property, nor has it been recently disturbed except for a few dirt trails and dirt roads that traverse through the site. The proposed project would include a residential development of the property in addition to access drives to the residences on the site and associated infrastructure. The Town has requested that the owner build a flood control channel as a part of the development, to provide consistency with its Master Drainage Plan. ECORP Consulting, Inc. conducted a jurisdictional delineation survey in order to assess the potential for jurisdictional waters on the project site.

No jurisdictional waters were observed during the site visit. Directions from Los Angeles to the site are presented in Appendix A and a complete list of plant species observed during the site visit is presented in Appendix B, and a list of sensitive species previously documented in the property region with potential for presence on the site is presented in Appendix C.

Although no drainage features were observed on the site, a small patch of Chinese elm trees (*Ulmus parviflora*) were observed near the southwestern portion of the site. These trees were likely associated with a previous land use of the property. There was also a small manufactured ditch observed running from the copse of trees to the southeast and towards Sandia Road. This small ditch was likely created to alleviate flooding along Sandia Road at some point in the past. Neither Navajo Road nor Sandia Road has a storm drain system in place.

There are no potential Waters of the U.S. or CDFW jurisdiction mapped on-site, and as such no permitting pursuant to the federal CWA or Section 1602 (SAA) of the California Fish and Game Code will be required in regard to project activities.

1.0 INTRODUCTION

On behalf of BMI Investments, ECORP Consulting, Inc. (ECORP) conducted a delineation of potential Waters of the United States (U.S.) and Waters of the State of California (State) for a proposed residential development located on an approximately 32.2-acre parcel (Assessor's Parcel Number 434-063-02) in the Town of Apple Valley (Town), San Bernardino County, California (Figure 1. *Project Vicinity* and Figure 2. *Project Location*). The site is located on the Apple Valley South, California 7.5-minute topographical quadrangle (U.S., Geological Survey [USGS] 1994 and 1977, respectively) within Section 4, Township 4 North and Range 3 West. For reference, the approximate center of the project area is located at latitude 34.466053° and longitude -117.191794° within the Southern Mojave Watershed (Figure 3. *Hydrologic Unit Code #18090208*) [Natural Resources Conservation Service (NRCS), U.S. Geological Survey (USGS), and Environmental Protection Agency (USEPA) 2016].

This report describes potential Waters of the U.S., including wetlands, identified within the site that may be regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA) and the State Water Resources Control Board (SWRCB). The information presented in this report provides data required by the USACE Los Angeles District for conducting Jurisdictional Determinations. The potential Waters of the U.S. boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the site, and are subject to modification following the USACE verification process. This report also covers California Department of Fish and Wildlife (CDFW) jurisdiction.

BMI Investments proposes the development of the majority of the property for residential purposes. The proposed Project also includes infrastructure improvements. The Town of Apple Valley has also designated a portion of the property to be used as a drainage channel in accordance with the Town's Master Drainage Plan. Previous studies consulted for this report include a Biological Resource Assessment (BBC 2005) and Hydrology Study (MJE 2005) for the property.

1.1 Driving Directions to Project Site

The driving directions to the Project site from Los Angeles are included in Attachment A.

2.0 REGULATORY SETTING

2.1 Waters of the United States

This report describes potential Waters of the U.S., including wetlands that may be regulated by the USACE under Section 404 of the CWA.

2.2 Wetlands

Wetlands are "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" [51 FR 41250, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993]. Wetlands can be perennial or intermittent, and isolated or adjacent to other waters.



Location: N:\2018\2018-248 Navajo Rd JD\MAPS\Location_Vicinity\2018-248_JD_Vicnity_2019-01-15.mxd (SAB) -sbohac 1/15/2019

Map Date: 1/15/2019

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

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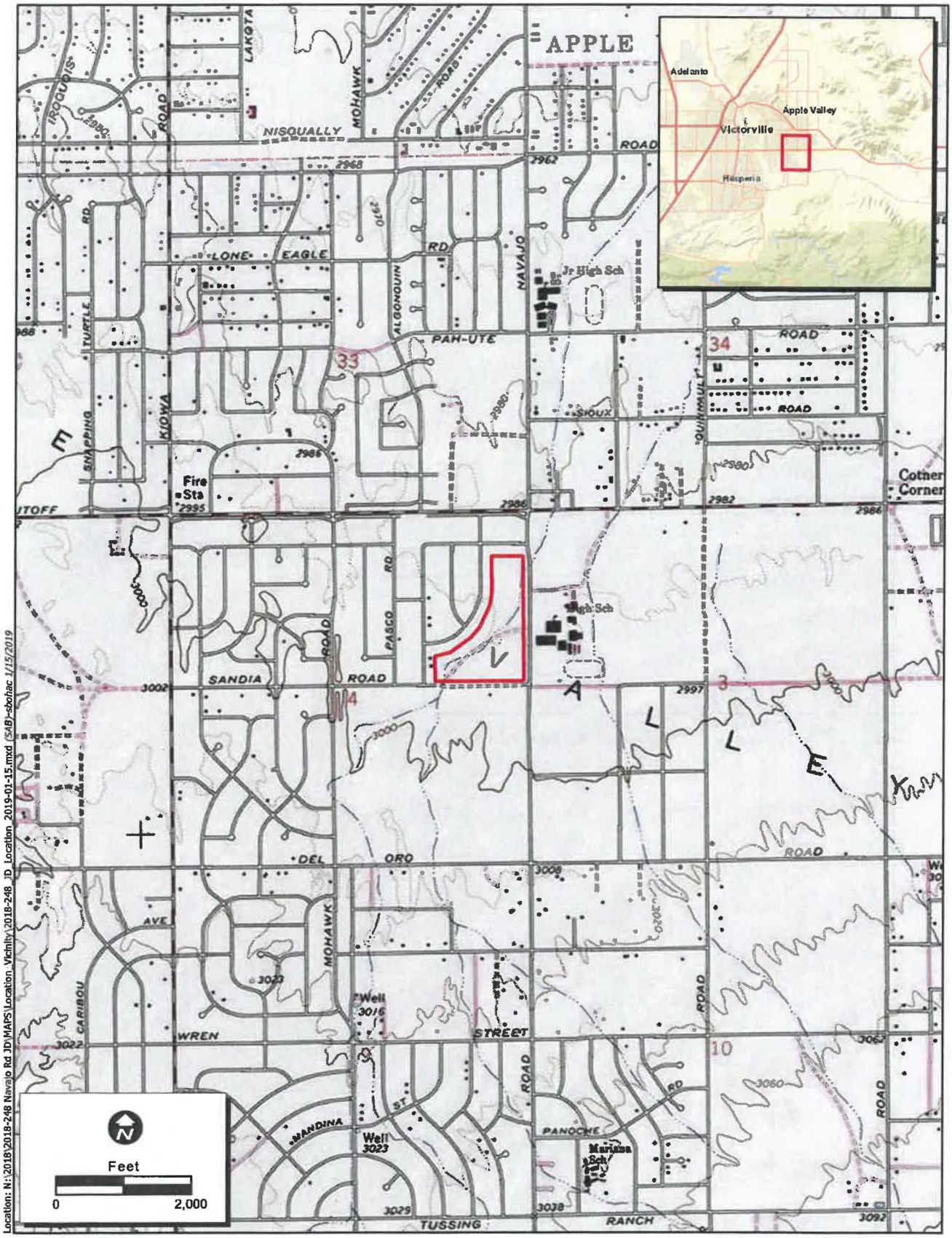
Figure 1. Project Vicinity

2018-248 Navajo Road Jurisdictional Delineation



Location: N:\2018\2018-248 Navajo Rd JD\MAPS\Location_Vicinity\2018-248_JD_Location_2019-01-15.mxd (SAB)-sbohac 1/15/2019

Map Date: 1/15/2019

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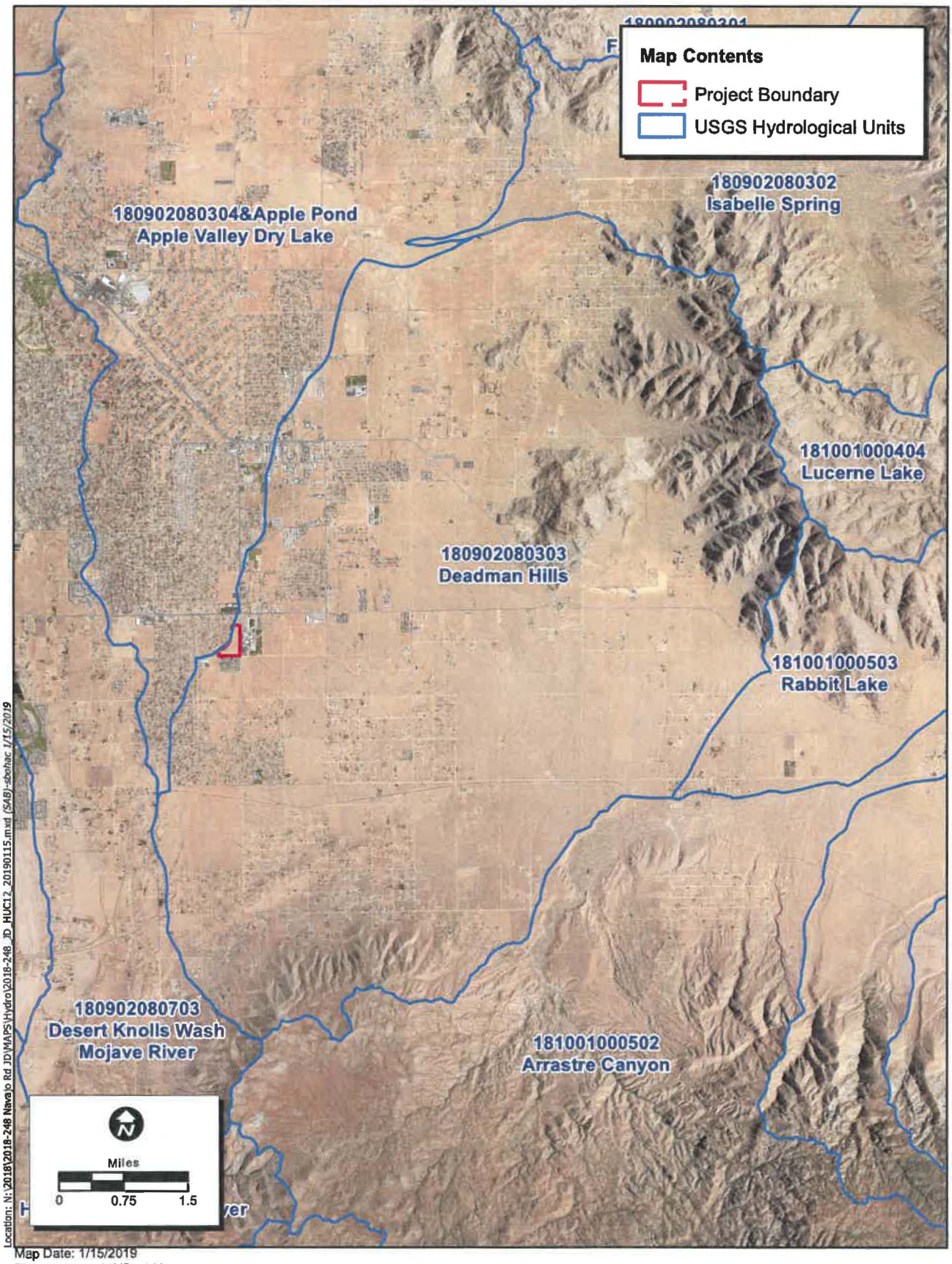
Figure 2. Project Location

2018-248 Navajo Road Jurisdictional Delineation



Map Date: 1/15/2019
Photo Source: NAIP 2016

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Figure 3. USGS HUC 12 Watershed Map

2018-248 Navajo Road Jurisdictional Delineation

Other Waters

Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses [51 FR 41250, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993]. The limit of USACE jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c)(1) as the "ordinary high-water mark" (OHWM). The OHWM is defined as the *"line on the shore established by the fluctuations 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"* [51 FR 41250, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993]. The bank-to-bank extent of the channel that contains the water-flow during a normal rainfall year generally serves as a good first approximation of the lateral limit of USACE jurisdiction. The upstream limits of other waters are defined as the point where the OHWM is no longer perceptible.

2.3 Federal Clean Water Act

The USACE regulates discharge of dredged or fill material into Waters of the United States under Section 404 of the CWA. "Discharge of fill material" is defined as the addition of fill material into Waters of the U.S., including, but not limited to:

- placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction;
- site-development fills for recreational, industrial, commercial, residential, and other uses;
- causeways or road fills; and
- fill for intake and outfall pipes, and subaqueous utility lines [33 C.F.R. §328.2(f)].

In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to wetlands, over 0.5 acre of impact, may require an individual permit. Projects that only minimally affect wetlands (less than 0.5 acre of impact) may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the SWRCB.

2.4 Jurisdictional Assessment

The Clean Water Rule (CWR) was published in June 2015, but implementation of the rule was stayed until September 2018. It is currently (2018) in effect for 22 states, including California, the District of Columbia, and the U.S. territories. The CWR establishes categories of waters that are jurisdictional, waters that are excluded, and waters that require a case-specific significant nexus evaluation to determine if they are Waters of the U.S. By rule, the CWR defines Waters of the U.S. to include Traditional Navigable Waters (TNW), interstate waters, and territorial seas, impoundments of jurisdictional waters, and tributaries and

adjacent (i.e. bordering, contiguous, or neighboring) waters to TNW, interstate waters, or territorial seas (USACE and USEPA 2015).

According to the CWR, neighboring is defined as waters located within 100 feet of the OHWM of a jurisdictional feature, within the 100-year floodplain of a jurisdictional feature and within 1,500 feet of the feature, or within 1,500 feet of the high tide line of a TNW, interstate water, or territorial sea. Western vernal pools in California and several other location-specific aquatic feature types are evaluated on a case-by-case basis to determine whether they have a significant nexus to TNWs, interstate waters, or territorial seas (USACE and USEPA 2017).

Feature types that are categorically excluded from CWA jurisdiction include waste treatment systems, prior converted cropland, ditches with intermittent or ephemeral flow that are not relocated tributaries or excavated in a tributary, ditches that do not flow, directly or indirectly, into a jurisdictional water, artificially irrigated areas that would revert to dry land in the absence of irrigation, artificial, constructed lakes or ponds created by excavating and/or diking dry land, small ornamental waters, artificial reflecting or swimming pools created by excavating and/or diking dry land, water-filled depressions created in dry land incidental to mining or construction activities, erosional features such as gullies, rills, and other ephemeral features that do not meet the definition of tributary, non-wetland swales, and lawfully constructed grassed waterways, and puddles (USACE and USEPA 2017).

2.5 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). Under the Porter-Cologne Water Quality Act, the SWRCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" [Water Code 13260(a)].

Waters of the State

Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" [Water Code 13050 (e)]. The SWRCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State that are not regulated by the USACE due to a lack of connectivity with a navigable water body. Regulation of Waters of the State is handled through the local Regional Water Quality Control Board (RWQCB), which may require issuance of a Waste Discharge Requirements for these activities.

The SWRCB is proposing a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review and approval of applications for Water Quality Certifications and

Waste Discharge Requirements for dredge or fill activities. Public hearing and subsequent revisions to the policy were held in 2016 and 2017. In January 2019 the SWRCB published the Final Draft and a public hearing for the Final Draft was held on January 22, 2019. After many comments were received, the approval of the policy was delayed a month for further review. Currently the policy is scheduled for a public workshop on February 5, 2019 and another approval hearing on March 5, 2019.

California Department of Fish & Game, Streambed Alteration Agreement

Section 1602 of the Fish and Game Code requires that a Streambed Alteration Application (SAA) be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and; if necessary, submits proposed measures to protect affected fish and wildlife resources to the applicant. The final proposal that is mutually agreed upon by CDFW and the Applicant is the SAA. Projects that require a SAA often also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the SAA overlap.

3.0 METHODS

This delineation of potential Waters of the U.S. was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Region Supplement) (USACE 2008a), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b). The boundaries of potential Waters of the U.S. were delineated through aerial photograph interpretation and standard field methodologies. No suspected wetlands were located on site, as a result no Arid West Region – Wetland Determination Data Forms were completed. Field maps with aerial photograph background were provided by California Department of Transportation Central Region Biology, North Branch (Caltrans). A color aerial photograph (1"=400' scale, NAIP 2012) was used to assist with mapping and ground-truthing. Munsell Soil Color Charts (Kollmorgen Instruments Co. 1990) and the Web Soil Survey (NRCS 2017) were used to aid in identifying hydric soils in the field. The Jepson Manual, 2nd Edition (Baldwin et al. 2012) was used for plant nomenclature and identification.

Field surveys were conducted on 19 December 2018 by ECORP biologist Scott Taylor. Mr. Taylor walked the entire project site/study area, hereafter referred to as the Delineation Area or DA, to determine the location and extent of potential Waters of the U.S. within the DA. Paired sampling point locations were sampled to evaluate whether or not the vegetation, hydrology, and soils data supported a determination of wetland or non-wetland status. Sample points were taken to sample vegetation, soils and hydrology of potential wetland features (described in more detail below). The total area of the wetlands and other waters within the site was recorded in the field using a post-processing capable global positioning system (GPS).

3.1 Routine Determinations for Wetlands

To be determined a wetland under federal guidelines, the following three criteria must be met:

- A majority of dominant vegetation species are wetland associated species

- Hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season
- Hydric soils are present

Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (Environmental Laboratory 1987). The definition of wetlands includes the phrase "a prevalence of vegetation typically adapted for life in saturated soil conditions." Prevalent vegetation is characterized by the dominant plant species comprising the plant community (Environmental Laboratory 1987). The dominance test is the basic hydrophytic vegetation indicator and was applied at each data point location. The "50/20 rule" was used to select the dominant plant species from each stratum of the community. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of coverage and cumulatively totaled) that immediately exceed 50 percent of the total coverage for the stratum, plus any additional species that individually comprise 20 percent or more of the total cover in the stratum (HQUSACE 1992; USACE 2008b).

Dominant plant species observed at each data point were then classified according to their indicator status (probability of occurrence in wetlands) (Table 1), North American Digital Flora: National Wetland Plant List (Lichvar et al. 2016). If the majority (greater than 50 percent) of the dominant vegetation on a site are classified as obligate (OBL), facultative wetland (FACW), or facultative (FAC), then the site was considered to be dominated by hydrophytic vegetation.

Table 1. Classification of Wetland-Associated Plant Species[1]

Plant Species Classification	Abbreviation	Probability of Occurring in Wetland
Obligate	OBL	Almost always occur in wetlands
Facultative Wetland	FACW	Usually occur in wetlands, but may occur in non-wetlands
Facultative	FAC	Occur in wetlands and non-wetlands
Facultative Upland	FACU	Usually occur in non-wetlands, but may occur in wetlands
Upland	UPL	Almost never occur in wetlands
Plants That Are Not Listed (assumed upland species)	N/L	Does not occur in wetlands in any region.

[1]Source: Lichvar et al. 2012

In instances where indicators of hydric soil and wetland hydrology were present, but the plant community failed the dominance test, the vegetation was re-evaluated using the prevalence index. The prevalence index is a weighted-average wetland indicator status of all plant species in the sampling plot, where each indicator status category is given a numeric code (OBL=1, FACW=2, FAC=3, FACU=4, and UPL=5) and weighting is by abundance (percent cover). If the plant community failed the prevalence index, the presence/absence of plant morphological adaptations to prolonged inundation or saturation in the root zone was evaluated.

Soils

A hydric soil is defined as 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 (NRCS 2018). Indicators that a hydric soil is present include, but are not limited to, histosols, histic epipedon, hydrogen sulfide, depleted below dark surface, sandy redox, loamy gleyed matrix, depleted matrix, redox dark surface, redox depressions, and vernal pools.

A soil pit was excavated to the depth needed to document an indicator, to confirm the absence of indicators, or until refusal at each data point. The soil was then examined for hydric soil indicators. Soil colors were determined while the soil was moist using the Munsell Soil Color Book (Munsell Color 2009).

Hydrology

Wetlands, by definition, are seasonally or perennially inundated or saturated at or near (within 12 inches of) the soil surface. Primary indicators of wetland hydrology include, but are not limited to: visual observation of saturated soils, visual observation of inundation, surface soil cracks, inundation visible on aerial imagery, water-stained leaves, oxidized rhizospheres along living roots, aquatic invertebrates, water marks (secondary indicator in riverine environments), drift lines (secondary indicator in riverine environments), and sediment deposits (secondary indicator in riverine environments). The occurrence of one primary indicator is sufficient to conclude that wetland hydrology is present. If no primary indicators are observed, two or more secondary indicators are required to conclude wetland hydrology is present. Secondary indicators include, but are not limited to: drainage patterns, crayfish burrows, FAC-neutral test, and shallow aquitard.

3.2 Ordinary High-Water Mark/Non-Wetland Waters

The discussion in this section briefly summarizes *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b). OHWM indicators commonly found in the Arid West include a clear natural scour line impressed on the bank, recent bank erosion, destruction of native terrestrial vegetation, and the present of litter and debris. Resources needed to delineate OHWM include aerial photography and other imagery, topographic maps and other maps (e.g. geological, soil, vegetation), rainfall data, stream gage data, and existing delineations (if present). Field identification of the OHWM includes noting general impression of the vegetation species and distribution, geomorphic features present, surrounding upland land use and hydrologic alterations, and in-stream and floodplain structures. In the field, the process of delineating the OHWM includes the identification of a low-flow channel (if present), a transition to an active floodplain, and an active floodplain through the presence of geomorphic features (e.g. presence of an active floodplain, benches, break in bank slope, staining of rocks, litter or drift) and vegetation indicators (e.g. presence of sparse/low vegetation, annual herbs, hydromesic ruderals, pioneer tree seedlings and saplings, xeroriparian species).

3.3 Weather Conditions During Survey

Weather conditions for the survey were ideal, with clear skies, wind from 0 to 3 miles per hour, and temperatures ranging from 62 to 66 degrees Fahrenheit.

4.0 RESULTS

4.1 Existing Site Conditions

The Project site encompasses approximately 32.2 acres and is located north of Sandia Road and west of Navajo Road. Surrounding areas include residential development to the north, south and west and Apple Valley High School to the east. An undeveloped parcel occurs across Sandia Road to the southeast. The Project is located in the Mojave Desert (excluding mountains) Subregion of the Mojave Desert region of the Desert Province (Baldwin, et al., editors. 2012). This area is characterized by a hot semi-arid climate, which is comprised of hot and dry summer months and cold winter months with little precipitation recorded annually. The Project site is situated at an elevation of approximately 3,000 feet above mean seal level (msl).

For the period from 1971 to 2000, annual average total precipitation at the Apple Valley, California (044647) reporting station was approximately 4.44 inches (California Data Exchange Center [CDEC] 2018a). Prior to the field survey, 1.12 inches of rain was recorded during the month of December 2018 at the Barstow reporting station (BFS), at 2,320 feet elevation and approximately 20 miles northeast of the Project; prior to that, the last measureable rainfall was recorded in November 2018 (CDEC 2018b).

The project site is subjected to repeated and ongoing disturbance from pedestrian traffic and vehicular traffic. There were other signs of disturbance such as presence of windblown trash and signs that much of the land had been mostly cleared of native vegetation previously. Small areas of disturbed Creosote Bush Scrub, with a few small Joshua trees (*Yucca brevifolia*), represented the only native vegetation community on site. The other vegetation community present on the project site was California annual grassland. No sensitive vegetation communities were observed on the project site. In addition, one land cover type, disturbed area was observed on the project site. The plant species observed within these cover types consisted of nonnative or invasive weedy species. Classification of the vegetation communities and land cover types within the project area are described in detail below.

4.2 Vegetation Communities

Creosote Bush Scrub – Disturbed (*Larrea tridentata* Shrubland Alliance)

Larrea tridentata Shrubland Alliance (Creosote Bush Scrub) is a vegetation type characterized by a sparse cover of shrubs where creosote bush (*Larrea tridentata*), a typical Mojave Desert shrub, represents more than 60 percent of the relative cover in the shrub canopy. This community represented the only native vegetation community on the project site and covered approximately five percent of the project site. The small areas of creosote bush scrub consisted of two small stands located in the southeastern corner of the project site along developed edges. The community was highly disturbed, but included rabbit brush (*Ericameria nauseosa*), silver cholla (*Cylindropunti echinocarpa*) and Joshua trees, along with nonnative weedy plants interspersed throughout.

California Annual Grassland

California annual grassland was located in large patches in the northern, western and southern portions of the project site and covered 50 percent of the project site. California annual grassland is a classification derived from the first edition of the Manual of California Vegetation [Sawyer and Keeler-Wolf 1995] that

covers a wide range of herbaceous cover. The second edition [Sawyer et al. 2009] breaks this category down into a number of stands and the majority of the vegetation within the site could be classified as a combination of several of these stands. Dominant species within the California annual grassland areas of the site consist of nonnative species such as brome grasses (*Bromus* sp.) and Mediterranean schismus (*Schismus barbatus*). Also present were Russian thistle (Salsola tragus) and field mustard (*Hirscfeldia incana*). These areas would likely fall into the following classification: *Bromus* (*diandrus, hordeaceus*) – *Hirschfeldia* and other mustards semi-natural stands, which is dominated by nonnative species.

Disturbed

Disturbed is not a vegetation classification, but rather a land cover type. Areas mapped as disturbed were largely devoid of native vegetation due to human disturbance and were dominated by open areas or nonnative weedy vegetation. Areas of dirt roads and bare dirt were also mapped as disturbed. The disturbed land cover type covered 27 percent of the project site and was present mostly around the perimeter of the project site. Plants present in this land cover type included a small group of Chinese elm, along with nonnative weedy species such as Russian thistle.

National Wetland Inventory

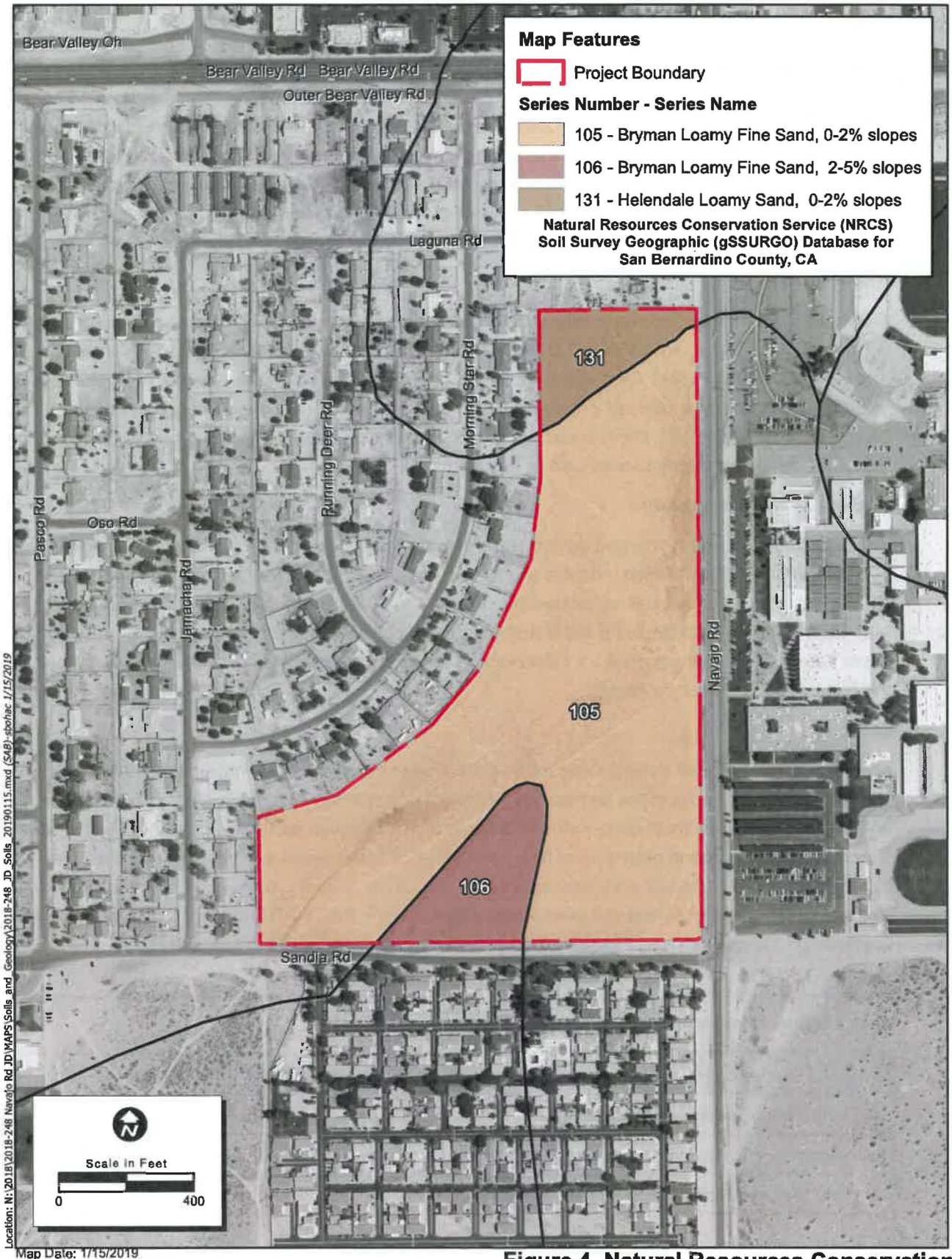
There is a single previously mapped aquatic feature on the Project site, consisting of a single riverine body (R4SBC).The R4SBC classification indicates an intermittent riverine streambed that is seasonally flooded. The feature mapped on site has no connection to the Mojave River but rather originates in the Ord Mountains south of the Project site and historically flowed northwards across what is now the Town of Apple Valley to end approximately 2.5 miles north of the Project site. Most of the historical flowpath of this feature has now been developed.

Soils

According to the Web Soil Survey, three soil units have been mapped for the Project site (NRCS 2017), consisting of two soil units of the Bryman Soil Series and one soil unit of the Helendale Soil Series. The Bryman Soil Series consists of deep, well-drained soils that are derived from alluvium and granitic sources. They occur on terraces and older alluvial fans. Helendale Soil Series consists of deep, well-drained soils that are derived from alluvium and granitoid sources, and occur on fans peidmonts, fan remnants, alluvial fans and terraces. None of these soil units are considered hydric (NRCS 2018) (Figure 4. *Natural Resources Conservation Service Soil Types* and Table 2. *Natural Resources Conservation Service Soil Types*).

Table 2. Natural Resources Conservation Service Soil Types

Soil Unit	Hydric?	Hydric Components (NRCS 2018)
105—Bryman Loamy Fine Sand 0-2 percent slopes	No	None
106—Bryman Loamy Fine Sand 2-5 percent slopes	No	None
131—Helendale Loamy Sand 0-2 percent slopes	No	None



Map Date: 1/15/2019
Photo Source: NAIP 2016

Figure 4. Natural Resources Conservation Service Soil Types

2018-248 Navajo Road Jurisdictional Delineation

4.3 Potential Waters of the U.S.

Based on the results of the delineation, no potential Waters of the U.S. have been mapped within the DA. There is a ditch located within the southern half of the DA that appears to have been excavated to drain Sandia Road, but this is not considered to be a Water of the U.S. due to there being no suspected connectivity with downstream interstate waters and lack of OHWM indicators.

The ditch ran approximately 400 feet to the northeast of Navajo Road and ended in a swale near the copse of Chinese elms. The ditch did not continue northwards and there were no potential OHWM features elsewhere on the site. This ditch may be intermittently inundated, primarily from runoff from Sandia Road, and support areas of open water associated with storm events, especially during the flash flood season. During the field assessment, the area upstream of the undeveloped parcel across Sandia Road was checked for signs of surface flow. There were no signs of regular through-flow in the area.

Vegetation within the ditch consisted of mostly herbaceous weeds with some shrubs such as rabbit brush. None of these plant species are typical of wetland vegetation. Although rabbit brush can occur within wetland areas or swales within desert areas, other criteria such as wetland hydrology and wetland soils were considered to be absent from the site.

4.4 Potential CDFW Jurisdiction

Based on the results of the delineation, no CDFW jurisdictional areas have been mapped within the DA. There is a ditch located within the southern half of the DA that occasionally collects stormwater flows from Navajo Road, but this is not considered to be under CDFW jurisdiction due to there being a lack of indicators of regular water flow through this area.

5.0 JURISDICTIONAL ASSESSMENT

No features on the project site were considered to be jurisdictional. Although formerly a stream was mapped through the property, according to National Wetland Inventory mapping, this feature appears to no longer function due to several developments that have occurred along its historic length. When development crosses or fills a historic drainage channel, it can result in dewatering that feature downstream or diverting its flows to a storm drain system or to another drainage system. It appears that the feature that was formerly present on site has been dewatered by intervening developments.

The USACE has permitting authority over activities affecting waters of the United States. According to Regulatory Guidance Letter (08-02), an Applicant "may elect to use a preliminary [Jurisdictional Determination] JD to voluntarily waive or set aside questions regarding CWA/[Rivers and Harbors Act of 1899]RHA jurisdiction over a particular site, usually in the interest of allowing the landowner or other "affected party" to move ahead expeditiously to obtain a Corps permit authorization where the party determines that it is in his or her best interest to do so" (USACE 2008c). A significant nexus evaluation is not necessary to obtain a preliminary JD. A preliminary JD is also not binding. An approved JD is an official Corps determination that jurisdictional "waters of the United States," or "navigable waters of the United States," or both, are either present or absent on a particular site.

6.0 CONCLUSION

No potential Waters of the U.S. or CDFW jurisdiction has been mapped on-site, and as such no permitting pursuant to the federal CWA or Section 1602 (SAA) of the California Fish and Game Code will be required in regard to Project activities.

7.0 REFERENCES

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LIST OF ATTACHMENTS

Attachment A – Driving Directions to the Project Site From Los Angeles

Attachment B – Plant Species Observed On-Site

Attachment C – Representative Site Photos

ATTACHMENT A

Driving Directions to the Project Site From Los Angeles

YOUR TRIP TO:

Apple Valley High School

2 HR 3 MIN | 86.8 MI

Est. fuel cost: $7.34

Trip time based on traffic conditions as of 6:14 PM on February 4, 2019. Current Traffic: Heavy

Print a full health report of your car with HUM vehicle diagnostics **(800) 906-2501**

1. Start out going **northeast** on N Main St toward E Temple St.

Then 0.28 miles — 0.28 total miles

2. Turn **right** onto W Aliso St.

W Aliso St is 0.1 miles past E Temple St.

If you reach W Arcadia St you've gone a little too far.

Then 0.04 miles — 0.32 total miles

3. Merge onto US-101 S toward **I-5 S/I-10 E.**

Then 0.83 miles — 1.15 total miles

4. Merge onto I-10 E via EXIT 1D on the **left** toward **I-10 E/San Bernardino.**

Then 40.03 miles — 41.17 total miles

5. Merge onto I-15 N via EXIT 58A toward **Las Vegas/Barstow.**

Then 36.19 miles — 77.36 total miles

6. Take the **Bear Valley Rd** exit, EXIT 147, toward **Apple Valley.**

Then 0.35 miles — 77.71 total miles

7. Turn **right** onto Bear Valley Rd.

If you reach Historic Route 66 you've gone about 0.2 miles too far.

Then 8.78 miles — 86.49 total miles

8. Turn **right** onto Navajo Rd.

Navajo Rd is 0.1 miles past Running Deer Rd.

If you reach Toltec Dr you've gone a little too far.

Then 0.26 miles — 86.75 total miles

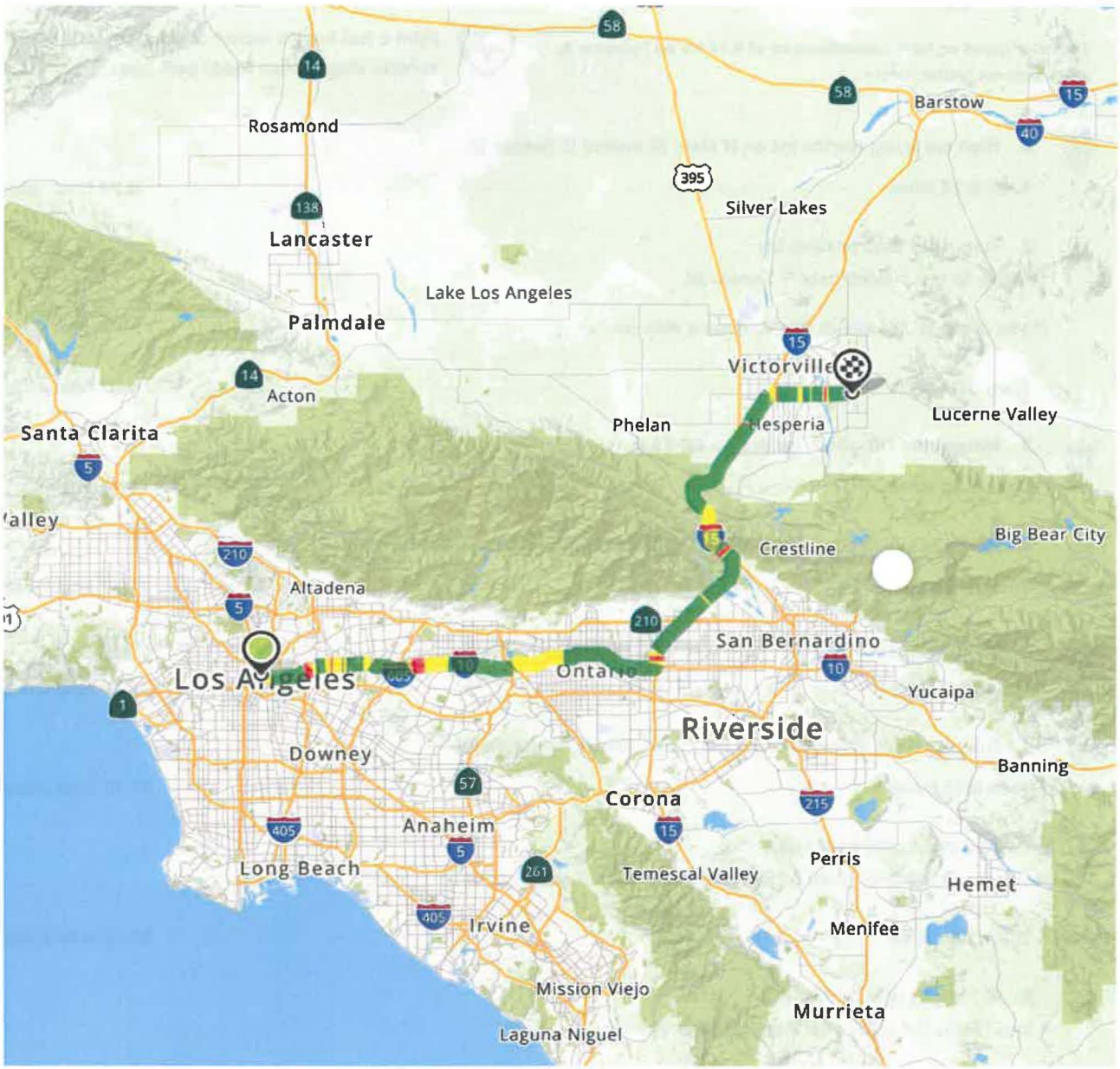
9. Apple Valley High School, 11837 Navajo Rd, Apple Valley, CA, 11837 NAVAJO RD is on the **left.**

Your destination is just past Oso Rd.

If you reach Sandia Rd you've gone about 0.2 miles too far.

Save to My Maps

Use of directions and maps is subject to our Terms of Use. We don't guarantee accuracy, route conditions or usability. You assume all risk of use.





Car trouble mid-trip?
MapQuest Roadside Assistance is here:

(1-888-461-3625)

ATTACHMENT B

Plant Species Observed On-Site

Plant List for 32.2-Acre Navajo Road Property		
Common Name	**Scientific Name**	**Native?**
Joshua tree	*Yucca brevifolia*	Y
silver cholla	*Cylindropuntia echinocarpa*	Y
rabbitbrush	*Ericameria nauseosa*	Y
Russian thistle	*Salsola tragus*	N
mustard	*Hirschfeldia incana*	N
Chinese elm	*Ulmus parviflora*	N
Mediterranean schismus	*Schismus barbatus*	N
creosote	*Larrea tridentata*	Y
red brome	*Bromus madritensis* ssp. *rubens*	N
ripgut brome	*Bromus diandrus*	N
California buckwheat	*Eriogonum fasciculatum*	Y

ATTACHMENT C

Representative Site Photos



Photo 1 – Southeast corner of site near Sandia Road (with ditch)



Photo 2 – Copse of Chinese elm trees



Photo 3 – Eastern boundary of site (along Navajo Road)



Photo 4 – Southern boundary of site (Sandia Road)



Photo 5 – Middle portion of property (disturbed and California annual grassland)



Photo 6 – Offsite property southeast of Sandia Road