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May 10, 2022 (updated August 30, 2022)

Stephanie Standerfer – Vice President
Albert A. Webb Associates
3788 McCray Street
Riverside, California 92506

RE: Jurisdictional Delineation for Elsinore Valley Municipal Water District Rice Canyon Reservoir Access Road and New Conduit Project in Lake Elsinore, California

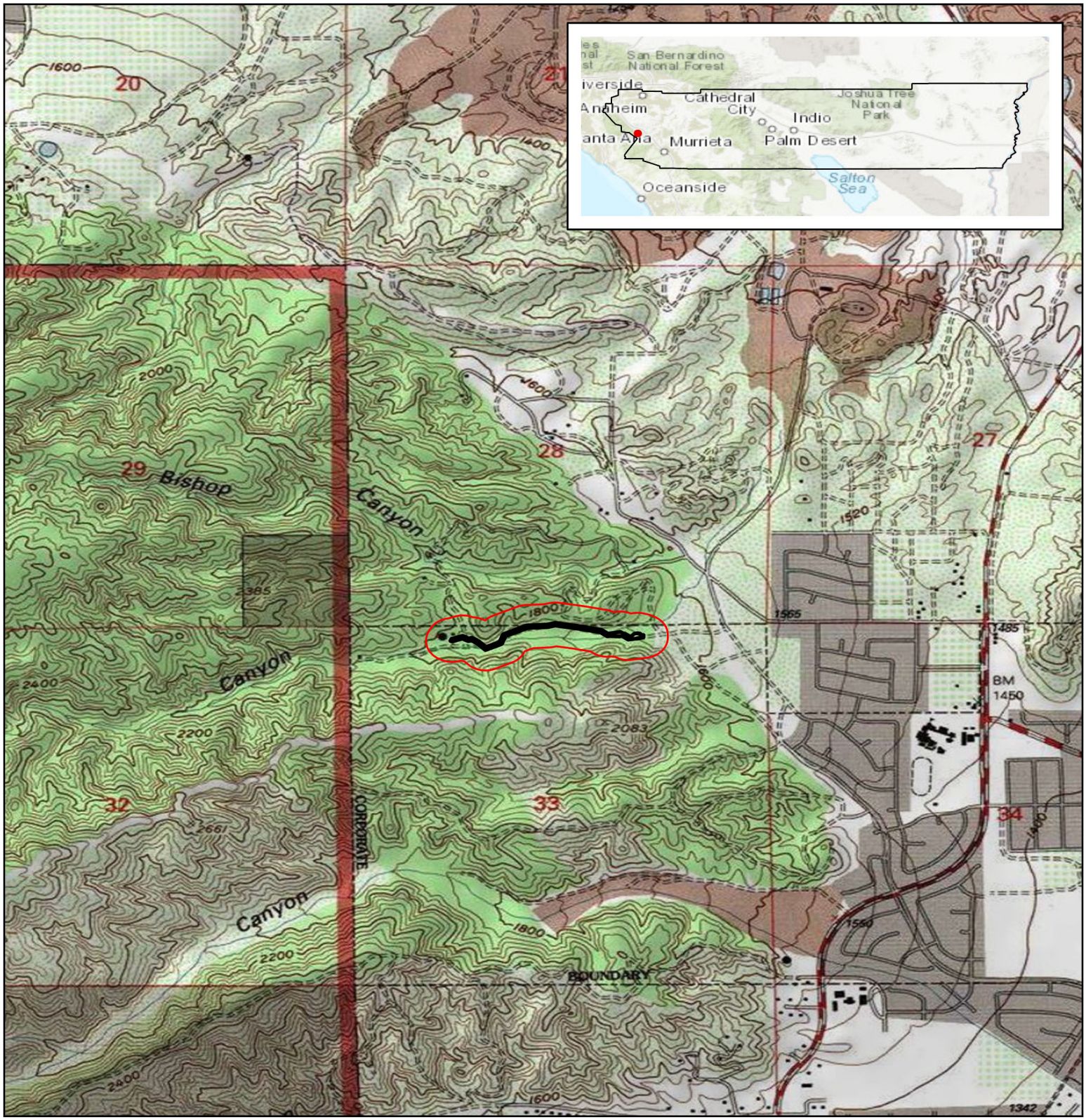
Dear Stephanie,

This letter includes results of a Jurisdictional Delineation and an assessment of impacts to jurisdictional features from the Elsinore Valley Municipal Water District (EVMWD) Rice Canyon Reservoir Access Road and New Conduit Project (project) in the City of Lake Elsinore, California. The scope of this letter report includes a description of the project, methodology, results of the survey, a delineation of the jurisdictional resources on the survey area, and an assessment of potential impacts to jurisdictional features.

Project Description

Location

The project site includes 2.56-acres located west of Dale Court in Lake Elsinore, California where a dirt access road extends west from Dale Court for approximately 2,500-feet and ends at an EVMWD water reservoir facility (attached Figure 1 and Figure 2). The project site is located on portions of four assessor's parcels (APNs 394-140-003, 394-140-004, 394-150-001, 394-150-011, and 394-140-001) on the Alberhill USGS 7.5-minute quad in Sections 28 and 33 of Township 05 South and Range 05 West. The project site is within Rice Canyon and the dirt road to be improved crosses through the creek within the canyon at three locations. The areas surrounding the project site to the north, south, and west are undeveloped native habitats except for the existing water tank facilities at the west end of the project site. Houses occur to the east of the project site along Dale Court.



Source: ESRI USA Topo Maps and World Topo Map 2022

EVMWD Rice Canyon Project

Figure 1. Project Location

Study Area (300-ft buffer)

Project Site

0 1,000 2,000 Feet

Scale: 1:24,000

N

Project Site is within the City of Lake Elsinore, California, in Riverside County on the USGS Alberhill 7.5-minute quadrangle map in Sections 28 and 33 of Township 05 South and Range 05 West

Center Coordinate (Decimal Degrees):
Latitude: 33.698366N, Longitude: -117.407709W

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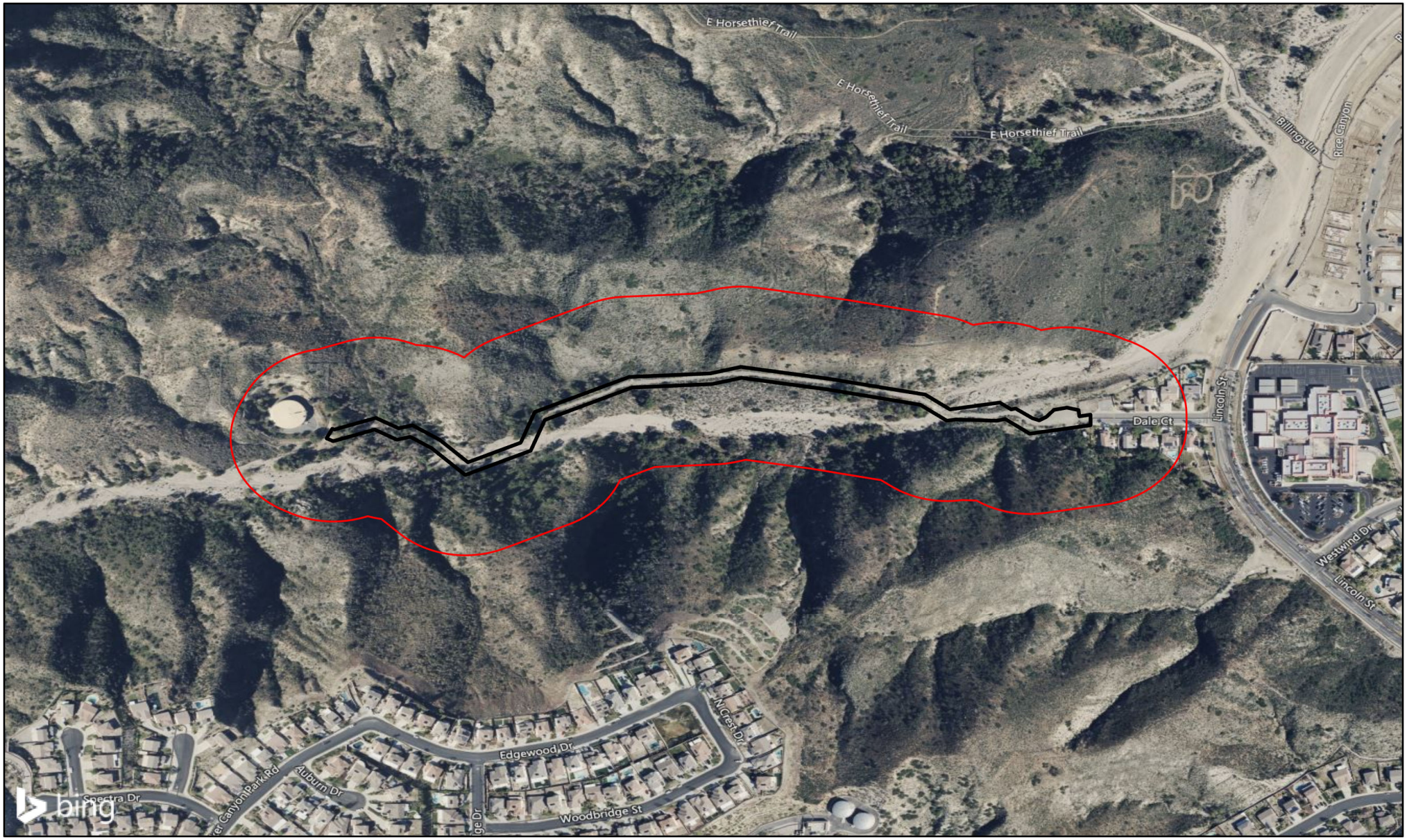

Source: BING Aerial Basemap 2022

EVMWD Rice Canyon Project

Figure 2. Project Site Vicinity

0 300 600 Feet

N

Study Area (300-ft buffer)

Project Site

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Proposed Development

The EVMWD proposes to make improvements to Rice Canyon Reservoir Access Road that include widening the road to a width of 40-feet and creating three new Arizona crossings through Rice Canyon Creek for a total project footprint of 2.56-acres. The improvements to the road will allow access for maintenance equipment to repair a conduit at the reservoir, and the project includes the future operation and maintenance of the road to allow for continued access to the reservoir.

Regulatory Setting

Federal Regulations

Clean Water Act Sections 404 and 401

Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged and fill material into waters of the United States (U.S.), including wetlands. Activities in waters of the U.S. or wetlands regulated under this program include fill as a result of projects such as development, water resource projects (such as dams and levees), infrastructure development and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the U.S.

Section 401 of the CWA requires that any person applying for a federal permit or license which may result in a discharge of pollutants into waters of the United States (such as a Clean Water Act Permit under Section 404), must obtain a state water quality certification stating that the activity complies with all applicable water quality standards, limitations, and restrictions. No license or permit may be issued by a federal agency until certification required by section 401 has been granted or waived.

California Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act requires the adoption of water quality control plans (basin plans) that give direction to managing water pollution in California. The basin plans get adopted and administered by the Regional Water Quality Control Board (RWQCB). The plans incorporate the beneficial uses of the waters of the State and then provide objectives that should be met to maintain and protect these uses. Along with the Regional Water Boards, the State Water Resources

Board can issue and enforce permits containing waste discharge requirements to maintain clean surface water and groundwater. Each basin plan identifies the specific beneficial uses of water in their region for the past, present, and future. These basin plans also all have objectives for which the plan clearly states steps that are being taken or will be taken to meet the objectives. These objectives are created for the purpose of keeping the water clean and safe to use beneficially. The Regional Board has the authority to give out permits for the purpose of waste disposal or waste assimilation.

State of California Fish and Game Code Section 1600

Fish and Game Code Section 1602 outlines the Lake and Streambed Alteration Agreement (LSAA) permitting process, and states:

- An entity shall not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake

Fish and Game Code Section 1602 requires any entity (defined as any person, State or local governmental agency, or public utility) to notify the CDFW before beginning any activity that will do one or more of the following:

- substantially divert or obstruct the natural flow of and river, stream, or lake, or
- substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

A permit, known as a Lake or Streambed Alteration Agreement, from CDFW is required to conduct any of the activities described above.

Regional Regulations

Western Riverside County MSHCP

The project site is within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Elsinore Area Plan. The project site is within MSHCP Cell Numbers 4250 and 4251 and is not within a Cell Group. Cells 4250 and 4251 are in the Alberhill Subunit of the Elsinore Area Plan.

Planning species in the Subunit that have the potential to occur on the project site include Bell's sage sparrow (*Artemisiospiza belli*), coastal California gnatcatcher (*Polioptila californica californica*), Cooper's hawk (*Accipiter cooperii*), downy woodpecker (*Picoides pubescens*), white-tailed kite (*Elanus leucurus*), Quino checkerspot butterfly (*Euphydrayas editha quino*), bobcat (*Lynx rufus*), mountain lion (*Puma concolor*), Munz's onion (*Allium munzii*), and San Diego ambrosia (*Ambrosia chenopodiifolia*). Biological issues and considerations in this subunit that are pertinent to the project site include preservation of sage scrub habitat for coastal California gnatcatcher, conservation of wetlands, maintain habitat connectivity with open spaces and BLM lands, and maintain core and habitat linkages for Quino checkerspot butterfly.

Methodology

This jurisdictional delineation is based on information compiled through a field survey and a review of appropriate reference materials and literature regarding the resources of the region. The jurisdictional delineation was conducted by South Environmental delineator James McNutt and the sources and literature referenced in this assessment are provided below in Section 4. Bibliography.

Literature Review

The assessment of the jurisdictional features began with a review of literature relating to the topography, soils, and hydrology that are known to occur on and in the vicinity of the project site, and include the following sources:

- United States Geologic Service (USGS) Alberhill 7.5"quad topographic map,
- US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soils Database (USDA 2022)
- National Hydrography Dataset (USGS 2022a)
- National Wetlands Inventory (USFWS 2022)
- National Watershed Boundary Dataset (USGS 2022b)
- Historic aerial photographs (historicaerials.com),

Jurisdictional Delineation

A delineation of waters of the U.S. and "waters of the state" was conducted on February 9, 2022 by South Environmental delineator James McNutt throughout the study area (project site and a

300-foot buffer) and included the area within the bed and banks of any jurisdictional features and the associated riparian areas. The limits of jurisdictional features were recorded in the field using ArcGIS Field Maps mobile application and a Trimble R1 GPS Receiver was used to ensure that the accuracy of the measurements was less than 36-inches of error.

Waters of the U.S.

Guidance documents released by the U.S. Army Corps of Engineers (USACE) following the US Supreme Courts' 2006 Rapanos Decision define waters of the U.S. as any of the following:

- Traditional Navigable Waters (TNWs),
- wetlands adjacent to TNWs,
- tributaries of TNWs (relatively permanent, minimum of a 3-month seasonal flow)
- wetlands directly adjacent to tributaries of TNWs.

Wetlands

The delineators used methods described in the USACE 1987 *Wetland Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008) to determine the presence or absence of wetlands. During the site survey the following three wetland indicators were evaluated:

1. Dominance of hydrophytic wetland vegetation,
2. Presence of hydric soils, and
3. Periods of surface flooding or ponding water (visible surface water or saturated soils).

The USACE Arid West 2016 *Regional Wetland Plant List* was used to determine the wetland indicator status of plants that were observed in the Review Area, and changes in vegetation, soils, or hydrologic features are used to identify boundaries of wetlands, when present. Completed *Wetland Determination Data Form – Arid West Region* worksheet were completed for the project and are included in Appendix B.

Non-Wetland Waters

Non-wetland waters of the US are waters that lack wetland vegetation or hydric soils and have a clearly defined Ordinary High-Water Mark (OHWM), which indicates periods of surface flow. The OHWM was delineated using the methods in two USACE guidance documents: *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Lichvar and McColley 2008) and *Updated Datasheet for the Identification*

of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2010). A completed Datasheet for Identification of the OHWM is found in Appendix B.

Waters of the State

Santa Ana Regional Water Quality Control Board

South Environmental assumes all waters of the US are also considered waters of the state and are under the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB). The limits of wetlands, or the OHWM for non-wetland waters delineated in the project site will also be considered the limits of waters of the state under the jurisdiction of the RWQCB.

California Department of Fish and Wildlife (CDFW)

Waters of the state that are under the jurisdiction of the California Department of Fish and Wildlife (CDFW) are delineated at the top of the bank of a stream and extend to riparian habitats or vegetation associated with watercourses. Riparian vegetation is that which depends on surface or groundwater associated with the stream to exist and other vegetation that is either more dense or vigorous than the surrounding communities will also be considered under the jurisdiction of the CDFW.

Results

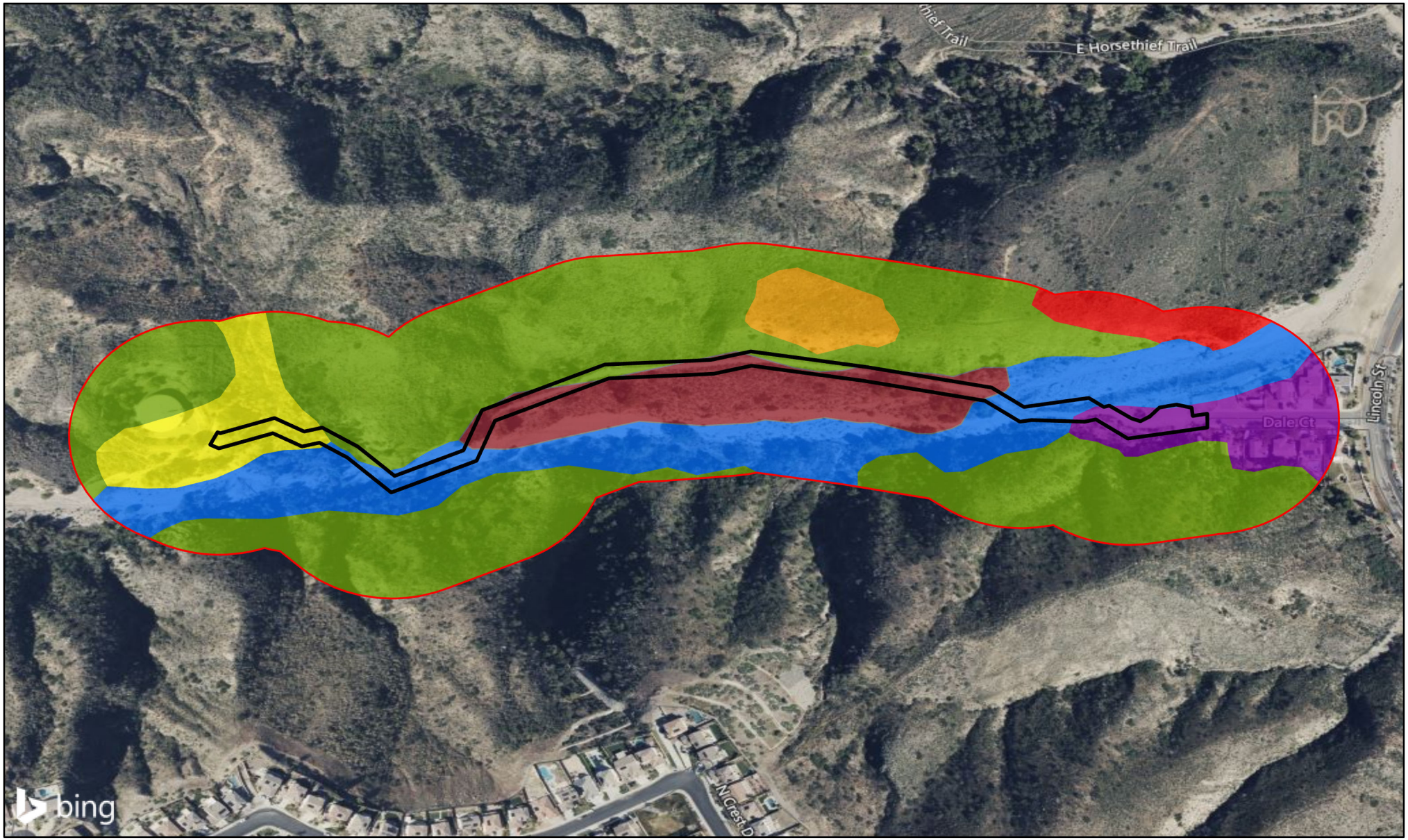
Topography and Climate

The project site is within a relatively flat canyon area with steep slopes to the north and south. At the base of the canyon is an ephemeral riverine streambed that is the remnant of a geologic feature that has created Rice Canyon. The project site is at an elevation of 1785-feet near the western end and 1650-feet near the eastern end. Climate in the region is hot and dry, with average summer high temperatures in the mid-90s and average winter lows in the low-40s. Average yearly rainfall is 2.63-inches, and the wettest months are December – March, and almost no precipitation between June-September.

Soils

Seven soils occur on the project site as shown in Figure 3:

- **Hanford coarse sandy loam, 2 to 8 percent slopes** occurs in the western part of the project site. This is an alluvial fan soil and is well drained.



Source: BING Aerial Basemap April 2022

EVMWD Rice Canyon Project

Figure 3. Soils

Project Site

Survey Area

Soils

Cieneba sandy loam, 30 to 75 percent slopes, eroded

Hanford coarse sandy loam, 2 to 8 percent slopes

Riverwash

Soboba cobbly loamy sand, 2 to 25 percent slopes

Tujunga loamy sand, channeled, 0 to 8 percent slopes

Vista coarse sandy loam, 15 to 35 percent slopes, eroded

Vista coarse sandy loam, 8 to 15 percent slopes, eroded

0 230 460 Feet

N

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- **Riverwash** occurs in the western part and eastern part of the project site. This is an alluvial fan soil and is well drained.
- **Tujunga loamy sand, channeled, 0 to 8 percent slopes** occurs in the central part of the project site. This is an alluvial fan and flood plain soil and is excessively drained.
- **Cieneba sandy loam, 30 to 75 percent slopes, eroded** occurs in the central part and western part of the project site. This is a residuum soil that is found on the side slope and backslope of hills and is somewhat excessively drained.
- **Soboba cobbly loamy sand, 2 to 25 percent slopes** occurs in the eastern part of the project site. This is an alluvial fan soil and is excessively drained.

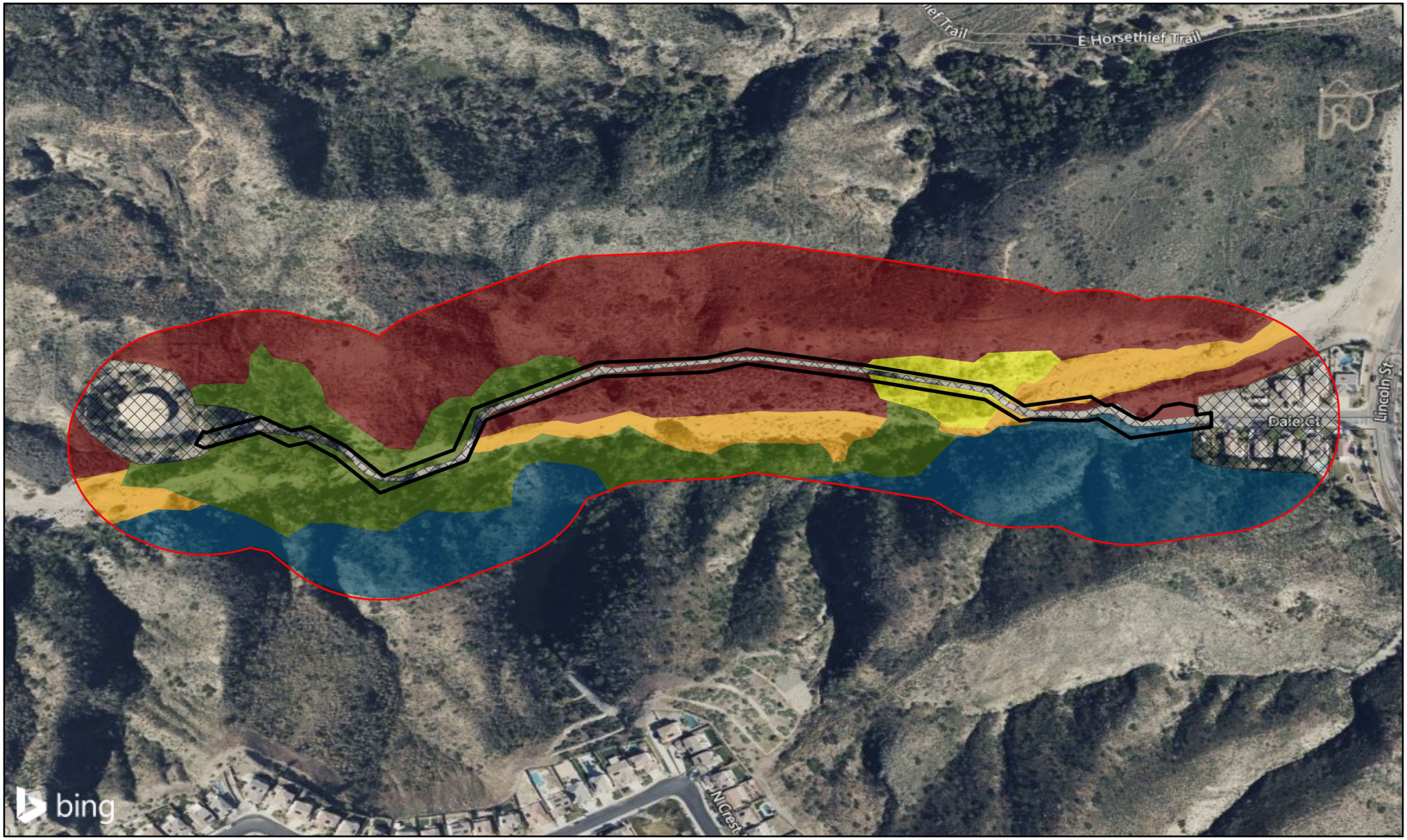
Plant Communities

There are five plant communities and one land cover type on the study area, and they are shown in Figure 4 below and acres of each is summarized in Table 1 below.

Table 1. Summary of Plant Communities on the Study Area

Community or Cover Type	Acres on Survey Area	Acres on Project Site
Chaparral	9.37	0.15
Coast Live Oak Woodland	8.11	0.43
Disturbed/Developed	4.73	1.10
Riparian Forest	1.28	0.19
Riversidean Alluvial Fan Sage Scrub	3.55	0.08
Riversidean Sage Scrub	18.03	0.61
Total	**45.07**	**2.56**

- **Chaparral** is found on 0.15-acre of the project site south of the dirt access road near Dale Court. Chaparral also occurs on the north-facing slopes south of the project site. This community is dominated by thick-leaved yerba santa (*Eriodictyon crassifolium*), laurel sumac (*Malosma laurina*), nightshade (*Solanum* spp.), and deerweed (*Acmispon glaber*) near the project site, and a variety of other species are found on the slopes south of the project site: scrub oak (*Quercus berberidifolia*), hollyleaf cherry (*Prunus ilicifolia*), sugar bush (*Rhus ovata*), blue elderberry (*Sambucus cerulea*), and tree tobacco (*Nicotiana glauca*).



Source: BING Aerial Basemap August 2022

EVMWD Rice Canyon Project

Figure 4. Plant Communities and Land Cover Types

0 225 450 Feet

N

Rice Canyon Project Site

Study Area (300-ft buffer)

Plant Communities

Chaparral

Coast Live Oak Woodland

Disturbed/Developed

Riparian Forest

Riversidean Alluvial Fan Sage Scrub

Riversidean Sage Scrub

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- **Coast live oak woodland** is found on 0.43-acre of the project site on the western third and surrounding the creek. This community is dominated by coast live oak (*Quercus agrifolia*) and has western sycamore (*Platanus racemosa*), toyon (*Heteromeles arbutifolia*), thick-leaved yerba santa, blue elderberry, laurel sumac, hollyleaf redberry (*Rhamnus ilicifolia*), sugar bush, deerweed, California buckwheat (*Eriogonum fasciculatum*), mulefat (*Baccharis salicifolia*), chamise (*Adenostoma fasciculatum*), coffee fern (*Pellaea andromedifolia*), giant wild rye (*Elymus condensatus*), chaparral bush mallow (*Malacothamnus fasciculatum*), and nightshade. This is a mature woodland with a mostly-closed canopy of oaks and a mixture of shrubs in a dense understory in upland areas, and a sparser understory of mulefat and other riparian and alluvial species in the woodland in the active floodplain of the creek.

- **Disturbed and developed** areas occur on 1.10-acres of the project site. These areas include the existing dirt access road and damaged Arizona crossings, as well as portions of the reservoir development and the entrance at Dale Court. This is the most abundance cover type found on the project site.

- **Riparian forest** occurs on 0.19-acre of the project site surrounding the access road on the north edge of the first creek crossing on the eastern portion of the project site. This community is dominated by mature western sycamore and has laurel sumac, California sagebrush (*Artemisia californica*), Russian thistle (*Salsola tragus*), blue elderberry, deerweed, thick-leaved yerba santa, brittlebush (*Encelia farinosa*), and chaparral bush mallow. This community forms a loose canopy and has a dense understory of shrubs.

- **Riversidean alluvial fan sage scrub (RAFSS)** occurs on 0.08-acre of the project site within the two areas where the access road crosses the active floodplain of the creek. This community typically has sparse vegetation with small shrubs such as scale broom (*Lepidospartum squamatum*), thick-leaved yerba santa, brittlebush, deerweed, California sagebrush, chaparral yucca (*Hesperoyucca whipplei*), and a variety of ruderal species in the disturbed portions, including tamarisk (*Tamarix ramosissima*), striped treasureflower (*Gazania linearis*), shortpod mustard (*Hirschfeldia encana*), two-color rabbit tobacco (*Pseudognaphalium biolettii*), and wild Canterbury bells (Phacelia minor). There is a smaller portion of this community near the oak woodland within the active floodplain that has a minor amount of sapling Fremont's cottonwood (*Populus fremontii*) and willow (*Salix* spp.).

- **Riversidean sage scrub (RSS)** occurs on 0.61-acre of the project site primarily on the north side of the creek and on the south-facing slopes north of the project site. This

community is dominated by thick-leaved yerba santa near the streambed, and has scrub oak, brittlebush, deerweed, chaparral yucca, laurel sumac, and California buckwheat. This community is mature, and the shrubs have some separation with less density and smaller size than the chaparral shrubs.

According to the CNDDB sensitive riparian communities occur on the project site and this is indicated by the riparian forest and RAFFS that were mapped during the survey. These are both considered sensitive due to the rarity of these communities, the high number of species that are obligates of these communities, and the relatively high biological value due to the dynamic community of plants and animals that occur in riparian and alluvial areas. Oak woodlands are also known to be very diverse natural communities with high biological value that have a lot of microhabitats capable of supporting many species (Douglas Tallamy 2008).

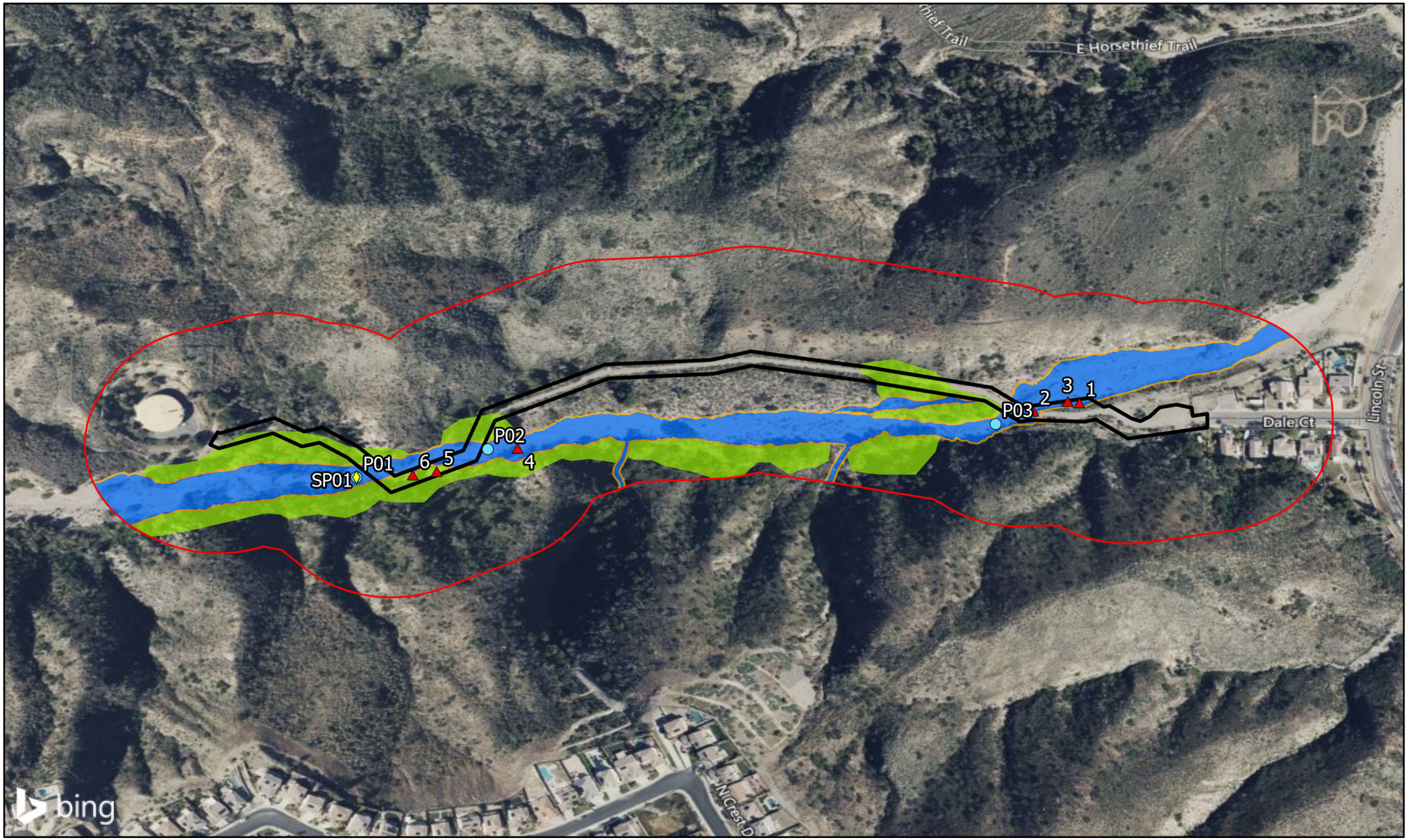
Jurisdictional Features

The project site is located within the Santa Ana watershed (HUC8) and within the Dawson Canyon-Temescal Wash sub-watershed (HUC12). As shown in Figure 5, Rice Canyon Creek, an ephemeral stream, occurs in the survey area, and it crosses through the project site at three locations. There is also associated riparian areas surrounding the creek. The NHD shows the creek as a blueline stream and NWI classifies the creek as an R4SBC, which is a riverine system, intermittent streambed class that has a seasonally flooded water regime. This indicates a water body along a channel that only holds water during certain times of the year. Table 2 below summarizes the acres of Rice Canyon Creek in the survey area.

Table 2. Summary of Jurisdictional Features in the Survey Area

Feature	Linear Feet	Non-Wetland Waters of the State (CDFW) - acres	Non-Wetland Waters of the US (USACE/RWQCB) (acres)	Bank and Riparian Habitat (CDFW) - acres
Rice Canyon Creek (R4SBC)	2,665	5.2	5.2	5.3
Total	2,665	5.2	5.2	5.3

The results of this jurisdictional delineation are based on the best professional judgement of the qualified delineator, using the most up-to-date regulations, written policy, and guidance from regulatory agencies. However, all conclusions regarding potential jurisdiction in this report should be considered preliminary and at the final discretion of the regulatory agencies.



Source: BING Aerial Basemap 2022

EVMWD Rice Canyon Project

Figure 5. Jurisdictional Delineation

0 230 460 Feet

N

- Photo Point
- OHWM Data Form
- Wetland Data Form
- Project Site
- Study Area (300-ft buffer)
- Non-Wetland Waters of the US (USACE/RWQCB/CDFW) - 5.2-acres
- CDFW Riparian - 4.4-acres
- CDFW Streambed - 0.9-acres

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Rice Canyon Creek

A total of 2,665-linear feet (5.2-acres) of the unnamed ephemeral stream is in the survey area. The feature originates from a ridgeline that connects the Santiago Peak and Los Pinos Peak west of the survey area and flows toward the east approximately 2.67 miles into the survey area. Northeast of the survey area it enters what appears to be a surface mining operation along Rice Canyon Road and eventually into Temescal Wash and then terminates at Lake Elsinore. Lake Elsinore is considered a Traditional Navigable Water (TNW) per Section 404 of the CWA. Therefore, Rice Canyon Creek is considered non-wetland waters of the US and state under the jurisdiction of the USACE, RWQCB, and CDFW.

An OHWM Datasheet P01 was completed within one of three low flow channels of the broad active flood plain for Rice Canyon Creek near the west end of the project site. The width of the OHWM for P01 was approximately 10 ft. The ephemeral streambed was mostly dry at the time of the survey. The broad active floodplain has a top-of-bank that is 5 feet beyond the OHWM bounds to both the north and south at this location. A change in average sediment texture, a change in vegetation species, a change in vegetation cover, and break in bank slope indicated the OHWM. The sediment within each of the OHWM boundaries varies from fine silt and medium grained sand. Sediments in the active floodplain are also riverwash, with sizes that range from fine silt to cobbles. The NRCS soil data for this area validates that the soil is riverwash for this area. The indicators of the active floodplain include ripples, drift and debris, presence of bed and bank, benches, and surface relief. Similar conditions were observed at OHWM data form P02 and P03.

A Wetland Data Determination Form SP01 was also completed within a low point within the project site due to the presence of water saturation at the surface. Sedimentation here was riverwash with the intercalated presence of Cieneba sandy loam, 30-75% slopes. Hydric soils were present due to the presence of sandy gleyed matrix from 4"-8" below ground surface (bgs). The gleyed matrix occupied 65% of the substrate in this interval. To qualify for sandy gleyed matrix as an indicator, gleyed occupancy is required to be 60% for at least 2" in thickness. Wetland Hydrology was present due to saturation at the surface. Hydrophytic vegetation was not present. A dominance test failed at 50%, and a valid prevalence index was calculated due to the presence of hydric soil and wetland hydrology. The prevalence test also failed with a calculation of 3.7692. No hydrophytic vegetation was present to support hydric soils and wetland hydrology soil indicators; therefore, the area was determined to be non-wetland.

Impacts Analysis

Wetland Waters of the United States (USACE)

There are no wetlands within the survey area and no impacts would occur to wetland waters of the US.

Non-Wetland Waters of the Unites States (USACE/RWQCB)

The total permanent impacts anticipated from the project include 0.3-acre (413 linear feet) of non-wetland waters of the US under the jurisdiction of the USACE and the RWQCB within the OHWM of Rice Canyon Creek.

Wetland Waters of the State (RWQCB/CDFW)

There are no wetlands within the survey area and no impacts would occur to wetland waters of the state.

Non-Wetland Waters of the State (CDFW)

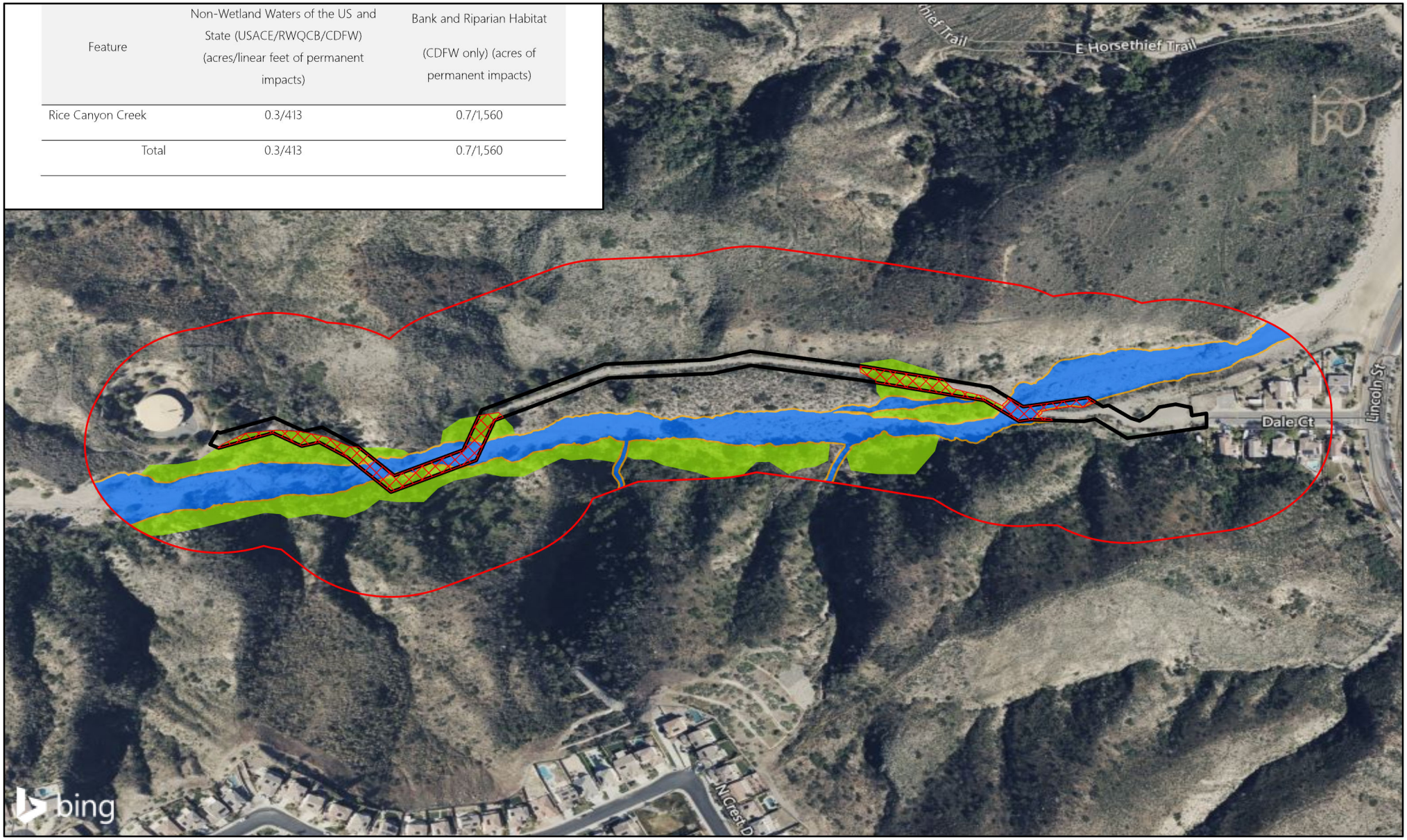
The total permanent impacts anticipated from the project include 0.3-acre (413 linear feet) of non-wetland waters of the state under the jurisdiction of the CDFW and is the same area as the Non-Wetland Waters of the US within Rice Canyon Creek.

Bank and Associated Riparian Areas (CDFW)

An additional 0.7-acre (1,560 linear feet) of permanent impact to the bank of Rice Canyon Creek (between the OHWM and the top-of-bank) and associated riparian habitat that is under the jurisdiction of CDFW would occur as a result of the project.

The impacts specifically will occur from the fill of the streambed with Arizona crossings and the grading and trimming of vegetation for the widening of the access road within the CDFW riparian areas surrounding the stream. The impacts from construction and operation of the access road through the ephemeral stream would be permanent as the road will be used and maintained into perpetuity to allow access to the reservoir facility at the end. These impacts are summarized in Table 3 and shown in Figure 6 below.

Feature	Non-Wetland Waters of the US and State (USACE/RWQCB/CDFW) (acres/linear feet of permanent impacts)	Bank and Riparian Habitat (CDFW only) (acres of permanent impacts)
Rice Canyon Creek	0.3/413	0.7/1,560
Total	0.3/413	0.7/1,560



Source: BING Aerial Basemap 2022

EVMWD Rice Canyon Project

Figure 6. Permanent Impacts to Jurisdictional Resources

0 230 460 Feet

N

- Study Area (300-ft buffer)
- Project Site
- Permanent Impacts to Jurisdictional Features
- Non-Wetland Waters of the US (USACE/RWQCB/CDFW) - 5.2-acres
- CDFW Riparian - 4.4-acres
- CDFW Streambed - 0.9-acres

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Table 3. Summary of Permanent Impacts to Jurisdictional Features

Feature	Non-Wetland Waters of the US and State (USACE/RWQCB/CDFW) (acres/linear feet of permanent impacts)	Bank and Riparian Habitat (CDFW only) (acres of permanent impacts)
Rice Canyon Creek	0.3/413	0.7/1,560
Total	0.3/413	0.7/1,560

Recommendations and Conclusion

Rice Canyon Creek occurs in the survey area and is under the jurisdiction of the USACE, RWQCB, and the CDFW. The proposed permanent impacts to the creek would occur to 0.3-acre of ephemeral stream and 0.7-acre of associated streambed and riparian areas from the installation of Arizona crossing in the streambed and widening of the access road in riparian areas. Arizona crossing will be permanently placed in the creek. Work would be completed when it is dry to avoid diverting the flow or inhibiting downstream movement.

Permits should be sought for impacts to these features that include: 1.) CDFW Notification of Lake or Streambed Alteration via the online portal, 2.) RWQCB Discharges of Dredged or Fill Material to Waters of the State notice of intent, and 3.) a USACE application. The project likely qualifies to proceed under USACE Nationwide Permit 14 – Linear Transportation Projects and will require a Preconstruction Notification (PCN). Permit conditions should be followed to compensate or mitigate for the impacts, and to avoid impacts to the remaining features during construction and operation of the development. If you have any questions regarding the information in this report, please contact Matthew South by mobile phone: 303.818-3632 or by email: msouth@southenvironmental.com.

Sincerely,

Matthew R. South

List of Attachments

1. **Attachment A**. Photograph Exhibit
2. **Attachment B**. Wetland Determination Data Form – Arid West Region and Arid West Ephemeral and Intermittent Streams OHWM Datasheets

Bibliography

Sawyer, J.O, Todd Keeler-Wolf, and Julie M. Evens. 2009. A Manual of California Vegetation, 2nd Edition.

U.S. Army Corps of Engineers (USACE). 2008a. Arid West Supplement to the 1987 Wetlands Delineation Manual.

USACE. 2008b. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. August.

USACE. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. July.

USACE. 1987. *Corps of Engineers Wetlands Delineation Manual*. Wetlands Research Program Technical Report Y-87-1. Department of the Army, Vicksburg, VA. U.S. Army Waterways Experiment Station. Hickman. J.C. [ed.].

US Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). 2022. Online Web Soil Survey Mapper (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm).

United State Geological Service (USGS). 2022. National Hydrography Dataset (NHD) The National Map Viewer. Accessed online: https://viewer.nationalmap.gov/services/

United State Fish and Wildlife Service (USFWS). 2022. National Wetlands Inventory Online Wetlands Mapper. Accessed online: https://www.fws.gov/wetlands/data/mapper.html

Attachment A

Photograph Exhibit

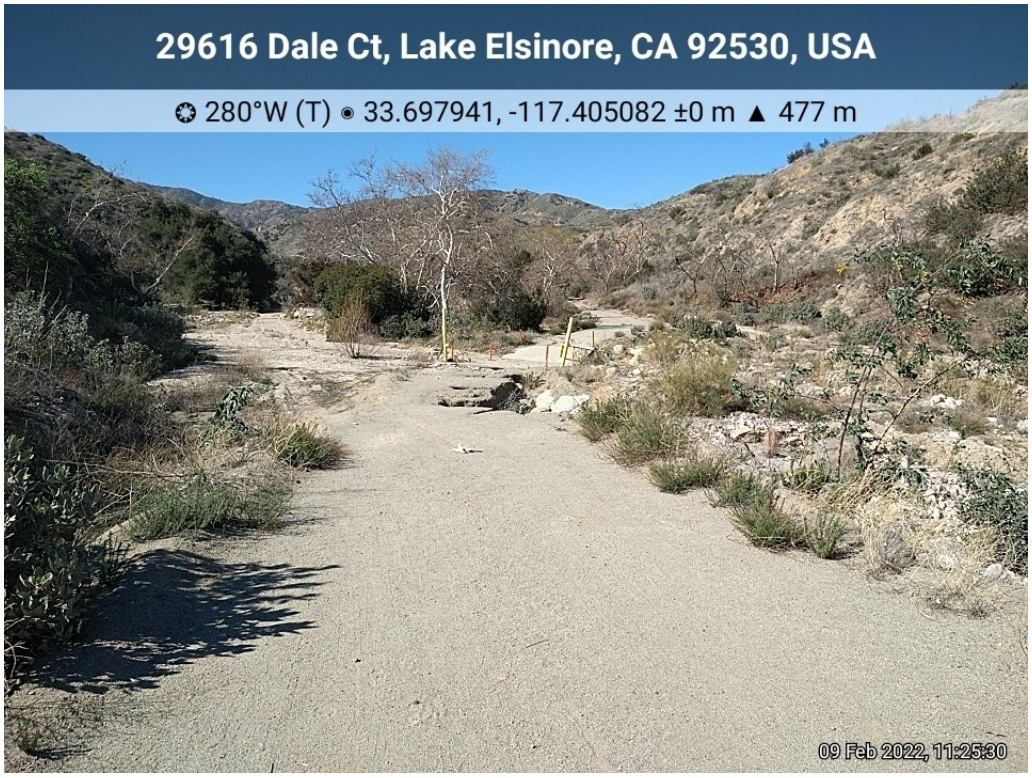


Photo 1. Depicts the access road where the eastern Arizona crossing will be constructed in Rice Canyon Creek.

Photo 2. Depicts Rice Canyon Creek at the washed out section of access road on the east end of the project.

Photo 3. Depicts Rice Canyon Creek floodplain north of the access road on the east of the project site.

Photo 4. Depicts the second project crossing through Rice Canyon Creek.

Photo 5. Depicts the second project crossing of Rice Canyon Creek. Old access road is visible in the foreground.

Photo 6. Depicts the third project crossing through Rice Canyon Creek on the west end of the project site.

Attachment B

Wetland Determination Data Forms – Arid West Region and Arid West Ephemeral and Intermittent Streams OHWM Datasheets

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Rice Canyon Access Road
Project Number: Rice Canyon Access Road
Stream: Unnamed Riverine (NWI R4SBC)
Investigator(s): James McNutt, M. South, S. Altmann

Date: 2/9/2022 **Time:** 12:15
Town: Lake Elsinore **State:** CA
Photo begin file#: P01 **Photo end file#:** P01

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Low flow channel with active floodplain

Projection: NAD 1983 **Datum:** 1765
Coordinates: 33.6974592N, -117.4106190W

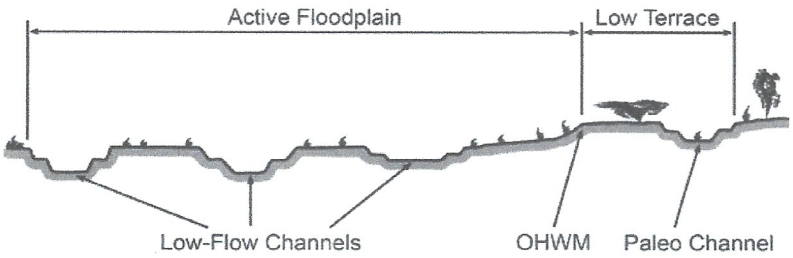
Potential anthropogenic influences on the channel system:
This riverine & canyon may be visited for hiking. The anthropogenic influences includes mild surface impacts and trash debris

Brief site description: Rice canyon is an erosional feature that is southeast of Santiago Peak and northeast of Los Pinos Peak. Rice canyon originates from a ridgeline that connects the two peaks. The riverine is the erosional feature that has created the canyon

Checklist of resources (if available):

- [X] Aerial photography
  Dates: Feb. 2022
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [X] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

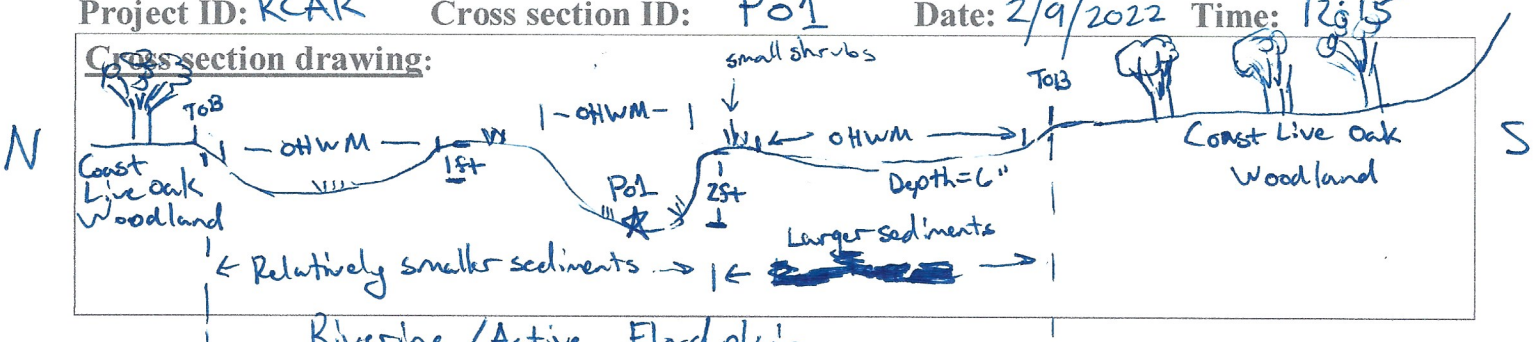


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [X] Digitized on computer
   - [X] GPS
   - [ ] Other:

Project ID: RCAR **Cross section ID:** P01 **Date:** 2/9/2022 **Time:** 12:15

Cross section drawing:



OHWM

GPS point: 33.6974592N, -117.4106190W

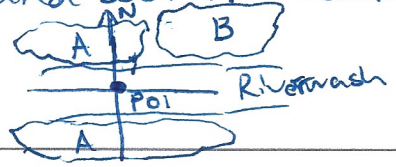
Indicators:

- [X] Change in average sediment texture
- [X] Change in vegetation species
- [X] Change in vegetation cover
- [X] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments: Riverwash sediments within riverine feature. Outside of active floodplain to both the north and south: Cienba sandy loam, 30-75% slopes, eroded.

A= Coast live oak woodland

B= Thick leaf yerba santa scrub



Floodplain unit:

- [X] Low-Flow Channel
- [X] Active Floodplain
- [ ] Low Terrace

GPS point: 33.6974592N, -117.4106190W

Characteristics of the floodplain unit:

Average sediment texture: fg-cobble

Total veg cover: 10 % Tree: 0 % Shrub: 10 % Herb: 0 %

Community successional stage:

- [ ] NA
- [X] Early (herbaceous & seedlings)
- [X] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [X] Ripples
- [X] Drift and/or debris
- [X] Presence of bed and bank
- [X] Benches
- [ ] Soil development
- [X] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments: Both thick leaf yerba santa and mulefat is present within the active floodplain in small concentrations at the early-mid successional stages.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Rice Canyon Access Road
Project Number: Rice Canyon Access Road
Stream: Unnamed riverine (R4SBC)
Investigator(s): J. McNutt, M. South, S. Altmann

Date: 2/9/2022 **Time:** 12:45
Town: Lake Elsinore **State:** CA
Photo begin file#: P02 **Photo end file#:** P02

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Active floodplain of riverine

Projection: NAD 1983 **Datum:** 1744
Coordinates: 33.6976796 N, -117.4095845 W

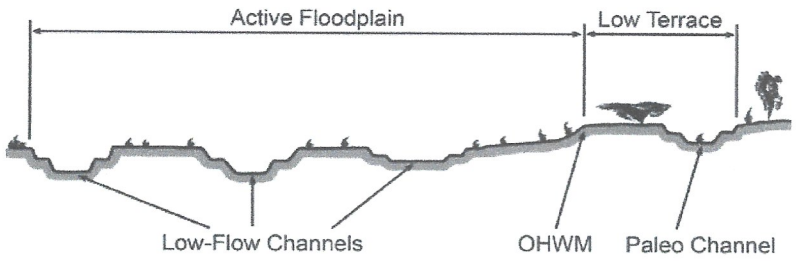
Potential anthropogenic influences on the channel system: This riverine and canyon may be used for hiking. The anthropogenic influences include mild surface impacts + trash debris.

Brief site description: Rice Canyon is an erosional feature that is southeast of Santiago Peak and northeast of Los Pinos Peak. Rice Canyon originates from a ridgeline that connects the two peaks. The riverine is the erosional feature that has created the canyon.

Checklist of resources (if available):

- [X] Aerial photography
  Dates: Feb. 2022
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [X] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

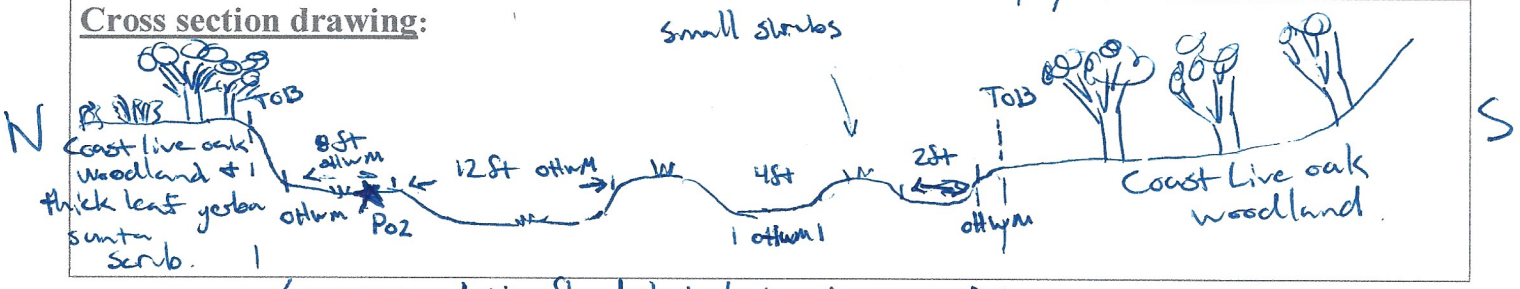


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [X] Digitized on computer
   - [X] GPS
   - [ ] Other:

Project ID: RCAR **Cross section ID:** P02 **Date:** 2/9/2022 **Time:** 12:45

Cross section drawing:



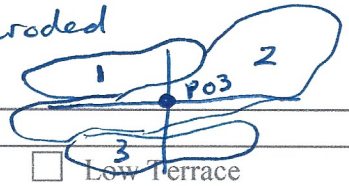
OHWM

GPS point: 33.6976796N, -117.4095845W

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [x] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments: Riverwash sediments within riverine feature.
North: (1) Cieneba sandy loam, 8-15% slopes, eroded (2) Riverwash
South (3) Cieneba sandy loam, 30-75% slopes, eroded



Floodplain unit:

- [ ] Low-Flow Channel
- [x] Active Floodplain
- [ ] Low Terrace

GPS point: 33.6976796N, -117.4095845W

Characteristics of the floodplain unit:

Average sediment texture: fg-cobble

Total veg cover: 10 % Tree: 0 % Shrub: 10 % Herb: 0 %

Community successional stage:

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [x] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [x] Benches
- [ ] Soil development
- [x] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments: Thick leaf yerba santa is present within the active floodplain in small concentrations at the early-mid successional stages.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Rice Canyon Access Road **Date:** 2/9/2022 **Time:** 1:10
Project Number: Rice Canyon Access Road **Town:** Lake Elsinore **State:** CA
Stream: unnamed riverine (R4SBC) **Photo begin file#:** P03 **Photo end file#:** P03
Investigator(s): J. McNutt, M. South, S. Altmann

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: low flow channel within active floodplain
Projection: NAD 1983 **Datum:** 1673
Coordinates: 33.69787777N, -117.40555858W

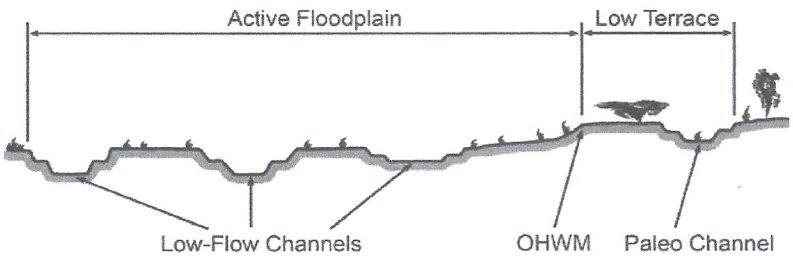
Potential anthropogenic influences on the channel system: This riverine and canyon may be used for hiking. The anthropogenic influences include mild surface impacts + trash debris.

Brief site description: Rice Canyon is an erosional feature that is southeast of Santiago Peak and northeast of Los Pinos Peak. Rice Canyon originates from a ridgeline that connects the two peaks. The riverine is the erosional feature that has created the canyon.

Checklist of resources (if available):

- [X] Aerial photography
  Dates: Feb 2022
- [X] Topographic maps
- [ ] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [X] Existing delineation(s) for site
- [X] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

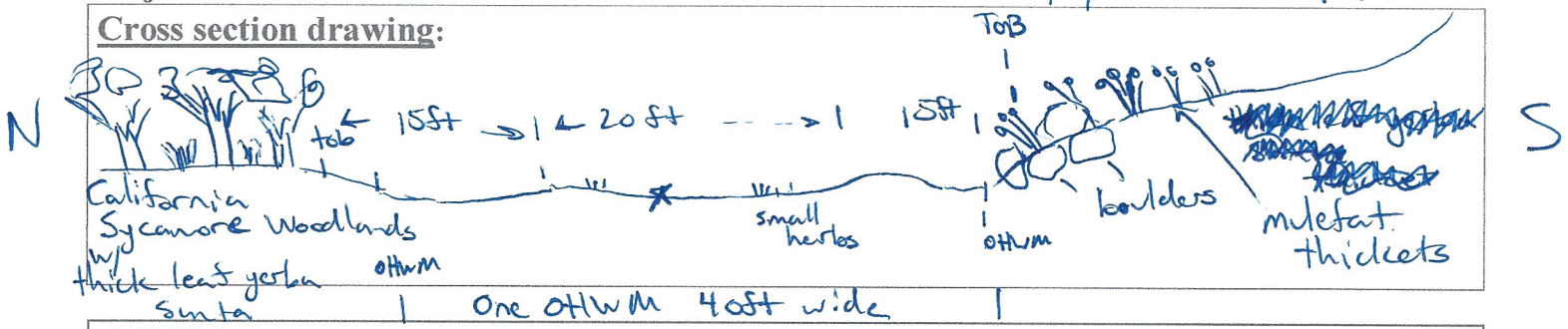


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - [X] Mapping on aerial photograph
   - [X] Digitized on computer
   - [X] GPS
   - [ ] Other:

Project ID: RCAR **Cross section ID:** P03 **Date:** 2/9/2022 **Time:** 1:10

Cross section drawing:



OHWM

GPS point: 33.6978777 N, -117.4055858 W

Indicators:

- [X] Change in average sediment texture
- [X] Change in vegetation species
- [X] Change in vegetation cover
- [X] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments: Riverwash sediments within riverine feature. Outside of active floodplain to both north and south:
1.) north: Cieneba sandy loam, 8-15% slopes, eroded
2.) south: Cieneba sandy loam, 30-75% slopes, eroded

Floodplain unit:

- [X] Low-Flow Channel
- [X] Active Floodplain
- [ ] Low Terrace

GPS point: 33.6978777N, -117.4055858W

Characteristics of the floodplain unit:

Average sediment texture: fg-cobble
Total veg cover: 7 % Tree: 0 % Shrub: 7 % Herb: 0 %
Community successional stage:

- [ ] NA
- [X] Early (herbaceous & seedlings)
- [X] Mid (herbaceous, shrubs, saplings)
- [ ] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [X] Ripples
- [X] Drift and/or debris
- [X] Presence of bed and bank
- [X] Benches
- [ ] Soil development
- [X] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments: Mulefat is present within the active floodplain in small concentrations at the early-mid successional stages.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rice Canyon Access Road City/County: Lake Elsinore, Riverside Sampling Date: 02/09/2022

Applicant/Owner: East Valley Municipal Water District State: CA Sampling Point: SP01

Investigator(s): James McNutt, Matt South, Scott Altmann Section, Township, Range: 33-5S-5W

Landform (hillslope, terrace, etc.): Riverine Local relief (concave, convex, none): concave Slope (%): 0-3%

Subregion (LRR): D Lat: 33.6975502N Long: -117.4105534 Datum: 1759

Soil Map Unit Name: Cienba sandy loam, 30-75% slopes / Riverwash NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks:
A valid prevalence index failed with a calculation of 3.7692.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15ft)			
1. Eriodictyon crassifolium	8	Y	N/A
2. Baccharis salicifolia	6	Y	FAC
3.			
4.			
5.			
	14	= Total Cover	
Herb Stratum (Plot size: 5ft)			
1. Dactylis glomerata	20	Y	FACU
2. Bryum argenteum	3	N	N/A
3.			
4.			
5.			
6.			
7.			
8.			
	23	= Total Cover	
Woody Vine Stratum (Plot size: 15ft)			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 63 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	
FACW species	0	x 2 =	
FAC species	6	x 3 =	18
FACU species	20	x 4 =	80
UPL species	0	x 5 =	
Column Totals:	26 (A)		98 (B)

Prevalence Index = B/A = 3.7692

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:
The dominance test was 50%. Hydric soils were present. Wetland hydrology was present.
A caculated Prevalence index failed at 3.7692.

SOIL

Sampling Point: SP01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10 YR 4/3	60	N/A				fg	Remaining 40% is Riverwash
4-8"	2.5 N	65	N/A				vfg-fg	Remaing 35% is Riverwash

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- X Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Cobbles

Depth (inches): 8"

Hydric Soil Present? Yes X No ___

Remarks:

A gleyed matrix that occupies 65% of the second (layer) interval is present. It is at least 4" thick.

(Qualifying veribles for S4 is 60% occupancy and at least 2" thick

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): N/A

Water Table Present? Yes ___ No X Depth (inches): N/A

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): Surface

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation was present at the surface.