

Appendix 4.1-2

Jurisdictional Delineation Memo

November 30, 2022

Brad Perrine
EcoTierra Consulting
633 W. 5th Street, 26th Floor
Los Angeles, CA 90071

RE: Jurisdictional Delineation for Hope Gardens Sequoia Building Project in Los Angeles, California (Conditional Use Permit No. RPPL2020000694 and Environmental Assessment No. RPPL2020003232)

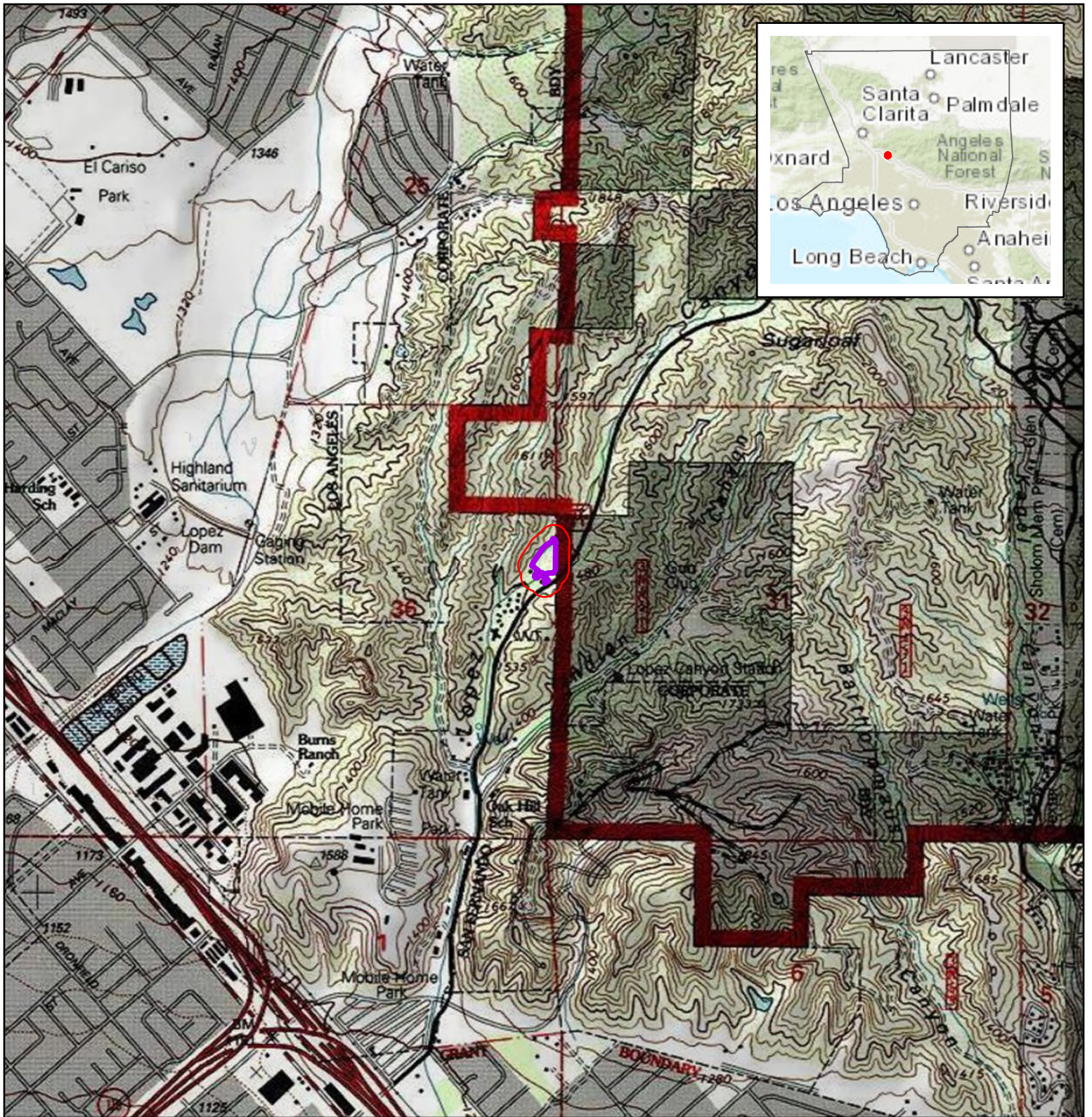
Dear Mr. Perrine,

This letter includes results of a Jurisdictional Delineation and an assessment of impacts to jurisdictional features from the Hope Gardens Sequoia Building Project (project) in an unincorporated area of Los Angeles County, California. The scope of this report includes a description of the project, methodology, results of the survey, a delineation of the jurisdictional resources on the study area, and an assessment of potential impacts to jurisdictional features with recommendations for mitigating or avoiding impacts.

Project Description

Location

The development site includes 1.98-acres that is located north of Lopez Canyon Road adjacent to the Angeles National Forest in unincorporated Los Angeles County, California. The development site includes developments associated with the Hope Gardens shelter and adjacent ornamental landscaping and undeveloped areas (attached Figure 1 and Figure 2). The development site is located on one right of way (road) parcel adjacent to Lopez Canyon Road and one assessor's parcels (APN 2846-001-017) on the San Fernando USGS 7.5-minute quad in Section 31 of Township 03 North and Range 14 West and Section 36 of Township 03 North and Range 15 West. The Angeles National Forest is north and east, Lopez Canyon Road to the south and beyond is undeveloped open space. Other buildings and roads associated with Hope Gardens occurs to the southwest, and a concrete lined drainage occurs on the west edge with landscaping and undeveloped open space beyond to the west.



Source: ESRI USA Topo Maps and World Topo Map 2022

Hope Gardens Sequoia Building Project

Figure 1. Project Location

- Development Site
- Survey Area (200-Foot Buffer)

Project Site is within unincorporated, California, in Los Angeles County on the USGS San Fernando 7.5-minute quadrangle map in Section 31 of Township 03 North and Range 14 West and Section 36 of Township 03 North and Range 15 West

Center Coordinate (Decimal Degrees):
 Latitude: 34.3027184N Longitude: -118.3969850W



0 1,000 2,000 Feet
 Scale: 1:24,000



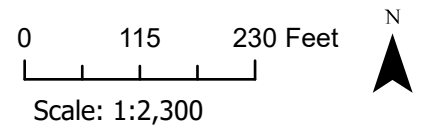


Source: BING Aerial Imagery 2022

Hope Gardens Sequoia Building Project

Figure 2. Project Vicinity

- Development Site
- Survey Area (200-Foot Buffer)
- California Protected Areas Database (CPAD)





Proposed Development

The proposed development on the development site includes: 1.) the demolition of the existing Sequoia building and the creation of a new Sequoia building that is mostly in its place and 2.) the widening of existing paved roads surrounding the building and resurfacing of parking areas. The development will occur in areas that are mostly developed with the Sequoia building, driveways, and parking areas, and these areas will be updated with the new building development, paving, and landscaping. Notably, the new driveway off of Lopez Canyon Road will be widened to a width of 28 feet. The development is shown in Figure 3 below and in the Site Plan in Attachment C.

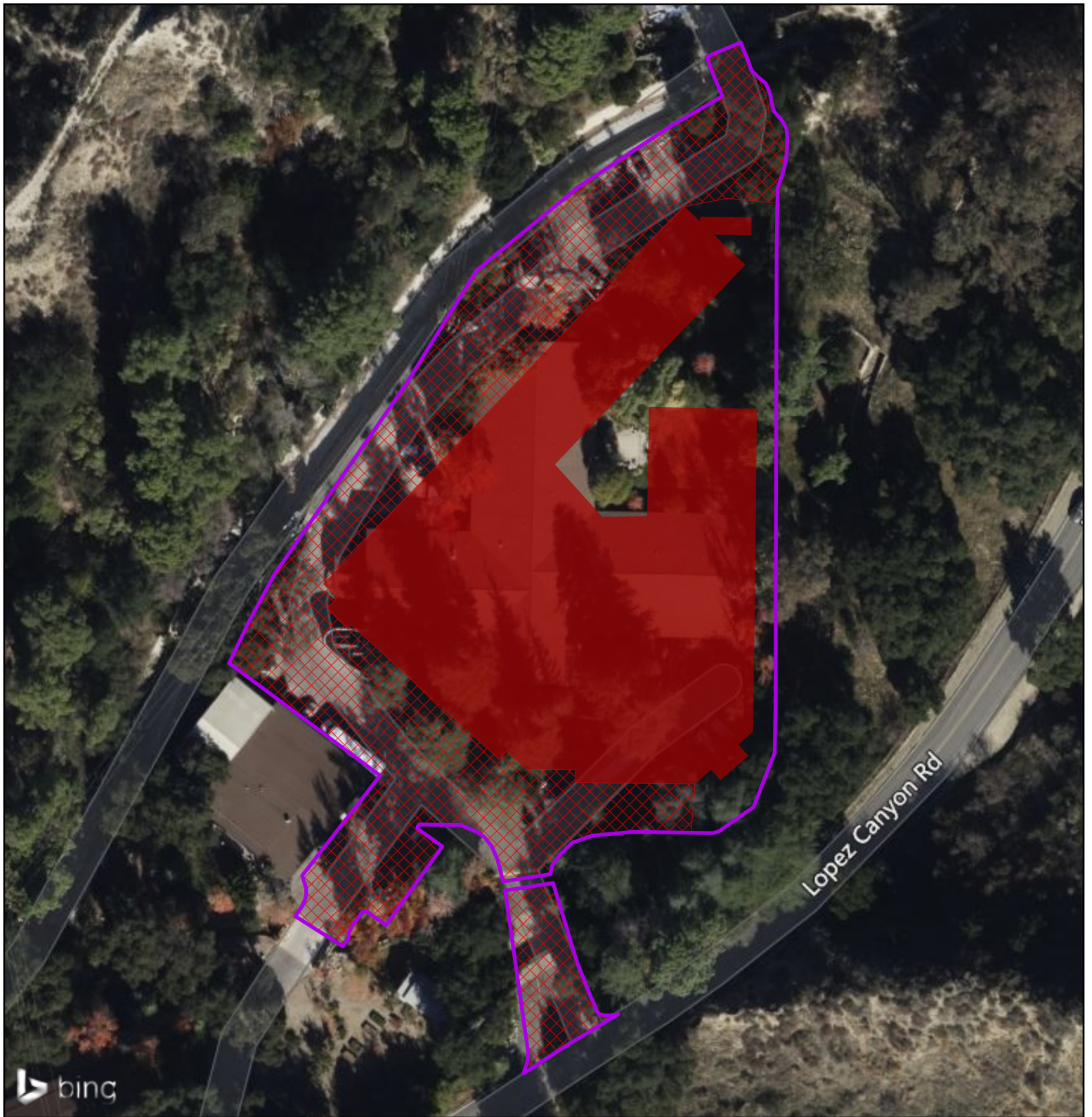
Regulatory Setting

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.




Source: BING Aerial Imagery 2022

Hope Gardens Sequoia Building Project

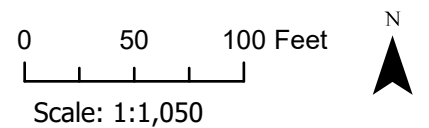
Figure 3. Proposed Development

 Development Site

Proposed Development

 Paving and Resurfacing

 Sequoia Building Footprint





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.

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 biologists Matthew South and Scott Altmann. The sources and literature referenced in this assessment are provided below in the 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 development site, and include the following sources:

- United States Geologic Service (USGS) San Fernando 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),
- Federal Emergency Management Agency (FEMA) flood GIS database (FEMA 2022)

Jurisdictional Delineation

A delineation of waters of the U.S. and "waters of the state" was conducted on October 18, 2022, throughout the study area (development site and a 200-foot buffer) and included the area within the bed and banks of any jurisdictional features and any possible associated riparian areas. The limits of jurisdictional features were recorded in the field using ArcGIS Field Maps mobile application and a Trimble Geode GPS Receiver was used to ensure that the accuracy of the measurements was less than 15-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

Los Angeles 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 Los Angeles Regional Water Quality Control Board (RWQCB). The limits of wetlands, or the OHWM for non-wetland waters delineated in the development 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.

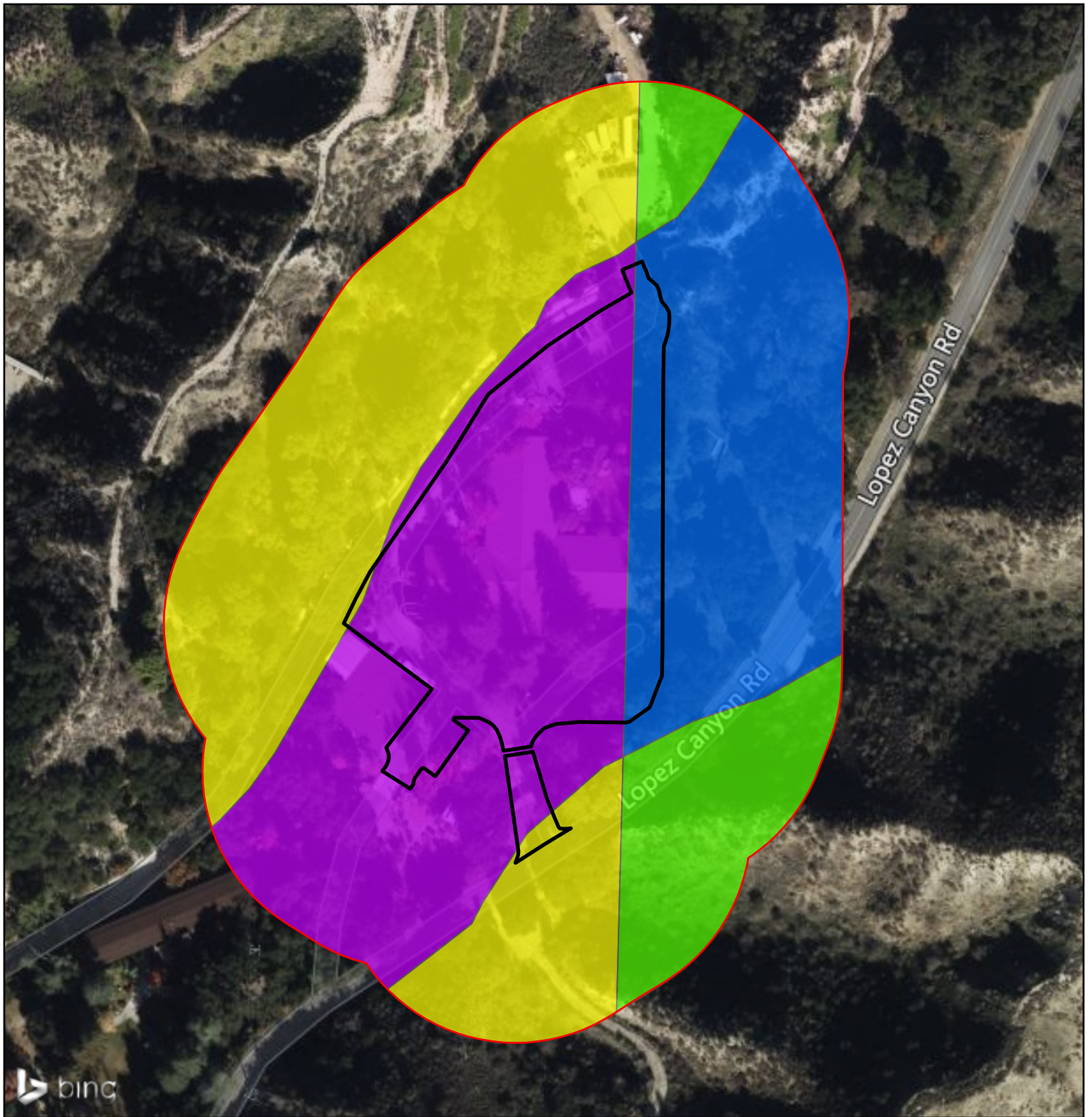
Results

Topography and Climate

The project is within Lopez Canyon, a northeast to southwest bearing erosional valley that has been eroded, in part, by an unnamed ephemeral channel. The unnamed ephemeral channel is a maintained concrete channel at the edge of the development site. The flow enters the concrete channel under the bridge at the north edge of the project that will be replaced. Regionally, Lopez Canyon has a broad southwestern slope, and the development site dips in that same southwestern direction. The highest elevation for the development site is 1439 feet above mean sea level (amsl) is along the northeast border, and the lowest elevation for the development site is along the southwestern border at an elevation of 1415 feet amsl. The climate in the region is hot and dry, with average summer high temperatures in the low-90s and average winter lows in the upper-30s and lower 40s. Average yearly rainfall is 0.83-inches, and the wettest months are November – March, and almost no precipitation between June-September.

Soils



Four soils occur on the development site as shown in Figure 4:







Source: BING Aerial Imagery 2022

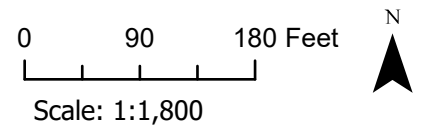
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Figure 4. Soils

-  Development Site
-  Survey Area (200-Foot Buffer)

Soils

-  Riverwash
-  Saugus loam, 30 to 50 percent slopes
-  Soboba gravelly loamy sand, 0 to 2 percent slopes
-  Trigo-Modesto-San Andreas families association, 15 to 70 percent slopes





- **Riverwash** occurs in the eastern part of the development site. This is an alluvial flat soil that is excessively drained.
- **Saugus loam, 30 to 50 percent slopes** occurs in the northwestern and southern parts of the development site. This is a mountain/backslope/mountain flank soil and is well drained.
- **Soboba gravely loamy sand, 0 to 2 percent slopes** occurs in the central and southwestern parts of the development site. This is a fan and floodplain soil and is excessively drained.
- **Trigo-Modesto-San Andreas families association, 15 to 70 percent slopes** occurs in the northeast and southeast parts of the development site. This is an ridge/mountain slope soil and is somewhat excessively drained.

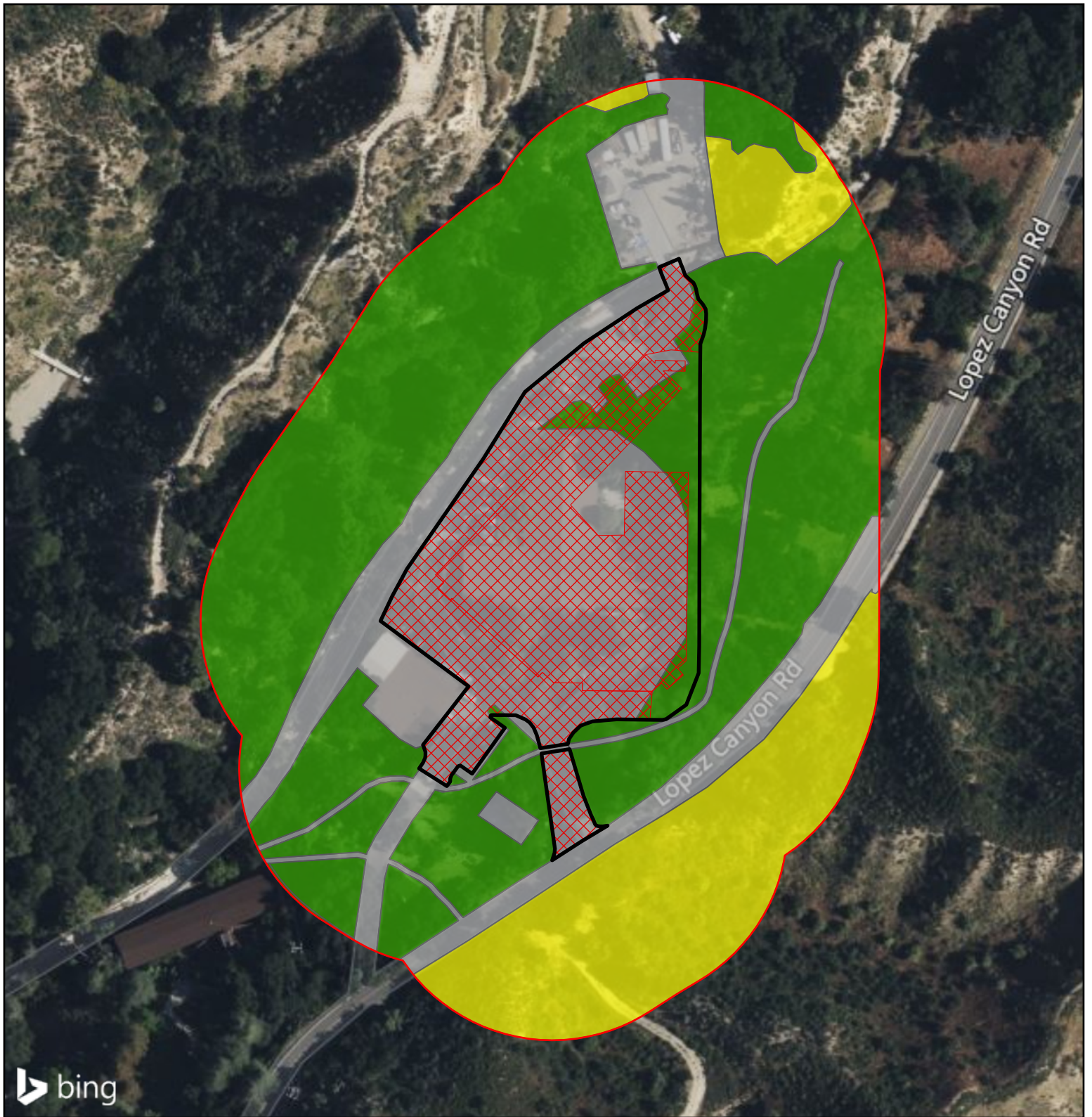
Plant Communities

There are two plant communities and one land cover type on the study area, and they are shown in Figure 5 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 the Study Area	Acres on Development site	Acres Within the Project Footprint
California sagebrush/California buckwheat scrub	1.58	0	0
Coast live oak woodland	4.56	0.29	0.13
Developed / Ornamental Landscaped	3.20	1.69	1.61
Total	9.34	1.98	1.74



- **California sagebrush/California buckwheat (Artemisia californica-Eriogonum fasciculatum Shrubland Alliance)** (CDFG & CNPS 2006) is found on 1.58-acres of the study area and 0.00-acres of the development site or project footprint. These areas are within the northern and southeastern parts of the study area and are upland and outside of any water feature jurisdiction. The community is dominated by the native shrubs California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*). Among others, also present was black sage (*Salvia mellifera*), laurel sumac (*Malosma laurina*), deerweed (*Acmispon glaber*), toyon (*Heteromeles arbutifolia*), mulefat (*Baccharis salicifolia*), birchleaf mountain mahogany (*Cercocarpus betuloides*), chaparral yucca (*Hesperoyucca whipplei*), hollyleaf redberry (*Rhamnus ilicifolia*), ripgut brome (*Bromus diandrus*), and tree tobacco (*Nicotiana glauca*).

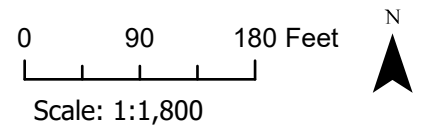


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


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Figure 5. Plant Communities and Land Cover

-  Development Site
-  Survey Area (200-Foot Buffer)
-  Proposed Development Footprint



Plant Communities and Land Cover

-  California Sagebrush-California Buckwheat Scrub
-  Coast Live Oak Woodland
-  Developed / Ornamental Landscaped





- **Coast live oak woodland (*Quercus agrifolia* Woodland Alliance)** (CDFG & CNPS 2006) is found on 4.56-acres of the study area, of which 0.29-acre occurs on the development site and 0.13-acre of that is within the project footprint. These areas are within the western, eastern, and northern parts of the study area and include some areas that are jurisdictional for waters features that are present on the development site. The community is dominated by mature coast live oak (*Quercus agrifolia*) and is co-dominated by red river gum (*Eucalyptus camaldulensis*). Several of the coast live oak are classified as a heritage tree in the Oak Tree Survey (South Environmental 2020). Other tree species present were Canary Island pine (*Pinus canariensis*). The shrub understory is made up of a few widely scattered native plants. Among others, the shrub canopy includes laurel sumac and California buckwheat. The ground cover is dense with non-native forbs and grasses. Among others, the ground cover includes ripgut brome and black mustard (*Brassica nigra*).
- **Developed – Ornamental Landscaped** cover type is found on 3.22-acres of the study area, of which 1.69-acres occurs on the development site and 1.61-acres of that is within the project footprint. These areas are within the northern and central parts of the study area, as well as Lopez Canyon Road within the southeastern part of the study area. The cover type is made up of existing development, including: the existing Sequoia building with its driveways, parking lots, and surrounding ornamental landscaped community. The community comprises lawn and a diversity of non-native ornamental plants. At the canopy level, important ornamental trees observed were sweetgum (*Liquidambar styraciflua*), strawberry tree (*Arbutus unedo*), deodar cedar (*Cedrus deodara*), Brazilian peppertree (*Schinus terebinthifolia*), and crape myrtle (*Lagerstroemia indica*). Among others, plants in the shrub layer included Indian hawthorn (*Rhaphiolepis indica*), rosemary (*Salvia rosmarinus*), candelabra aloe (*Aloe arborescens*), Japanese spindle tree (*Euonymus japonicus*), and American agave (*Agave americana*). Among others, the ground level included English ivy (*Hedra helix*) and natal lily (*Clivia miniata*).

Jurisdictional Features

The development site is located within the Los Angeles watershed (HUC8) and within the Lower Big Tujunga Creek sub-watershed (HUC12). As shown in Figure 6, unnamed ephemeral channel #1 is present in the northwest part of the study area and flows from northeast to southwest across the study area at the west edge of the development site. Unnamed ephemeral channel #1 enters the study area with natural dirt channel and becomes culverted under the bridge at the north edge of the project and is lined with concrete and masonry throughout the entire area south of the bridge. Also present in the survey are two much smaller culverted water features that are designed to control irrigation and stormwater flow for the development site and surrounding



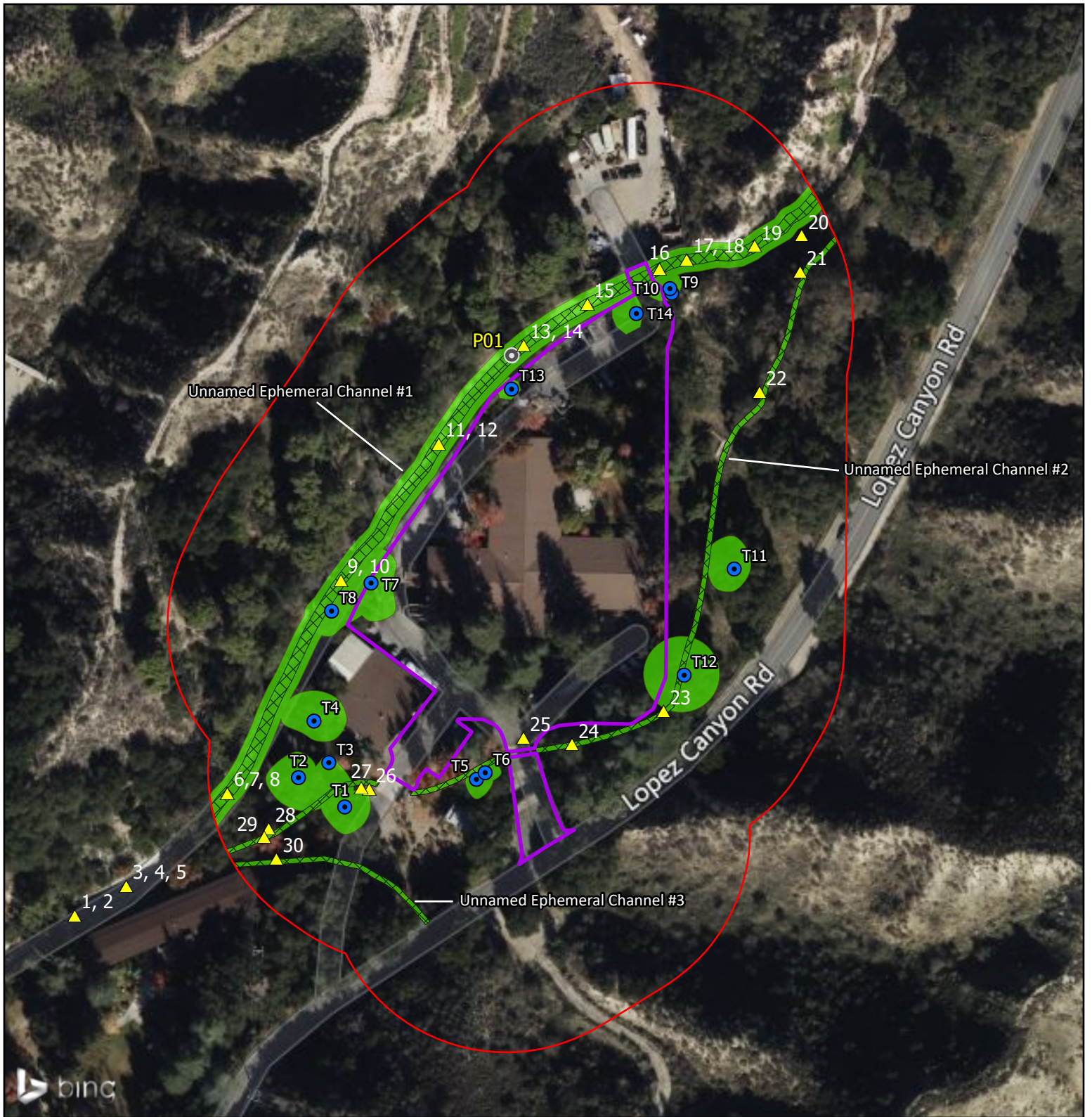
areas. Based on the debris, dry conditions, and lack of signs of hydrology it is likely the majority of the rock-lined channels no longer flow and have no upstream connection that may have previously occurred when initially constructed. These channels have some minor irrigation water and stormwater but have no significant source of water.

The OHWM for all three unnamed ephemeral channels in the study area is generally defined by a topographic flat plane within the base of its concrete channel. The top of bank (TOB) for all three unnamed ephemeral channels in the study area is generally defined by the contact point of the sloped part of the culvert against the ground level topographic plane. Some of the development site TOB boundaries are directly adjacent to other paved areas. Some of the development site TOB boundaries are directly adjacent to natural earth grounds. All three features lack floodplains and are entirely contained within the concrete channel. Riparian areas under CDFW jurisdiction extend to coast live oak (*Quercus agrifolia*) that overhang the channels and occur at the immediate edge of these features.

The NWI classifies unnamed ephemeral channel #1 in the northwestern part of the study area with a R4SBA identification code. This identifies unnamed ephemeral channel #1 as a riverine system with an intermittent streambed that is temporarily flooded. Unnamed ephemeral channel #2 and Unnamed ephemeral channel #3 are not features shown in the NWI and appear to be man-made channels. Table 2 below summarizes the acres of estimated jurisdictional features within the study area.

Table 2. Summary of Jurisdictional Features in the Study area

Feature	Non-Wetland Waters of the U.S & State (USACE/RWQCB) – acres/linear feet	Streambed and Riparian Habitat (CDFW) – acres/linear feet
Unnamed ephemeral channel #1	0.18/933	0.58/933
Unnamed ephemeral channel #2	0.10/ 1,029	0.32/1,029
Unnamed ephemeral channel #3	0.02/218	0.02/218
Total	0.30/2,180	0.92/2,180

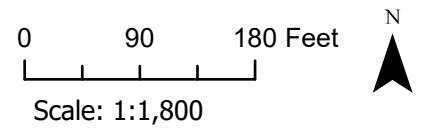


Source: BING Aerial Imagery 2022

Hope Gardens Sequoia Building Project

Figure 6. Jurisdictional Delineation

- Development Site
- Survey Area (200-Foot buffer)
- ▲ Photo Point
- OHWM Form
- Jurisdictional Trees
- USACE/RWQCB Non-Wetland Waters of the US/State
- CDFW Jurisdiction





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.

Unnamed Ephemeral Channel #1

A total of 933-linear feet (0.58-acres) of unnamed ephemeral channel #1 is on the development site, including 1.) 0.18-acres that are jurisdictional within the OHWM and 2.) 0.40-acres of jurisdictional areas between the OHWM and top-of-bank, plus associated riparian habitat. Unnamed ephemeral channel #1 originates off-study area to the northeast channel and traverses southwest out of the study area. Unnamed ephemeral channel #1 enters Hansen Dam 2.80 miles southeast of the study area and connects to Tujuanga Wash at Hansen Dam Park. Tujuanga Wash is a tributary the Los Angeles River, and the Los Angeles River is considered a Traditional Navigable Water (TNW) due to its connection with the Pacific Ocean. As a result, unnamed ephemeral channel #1 is considered a water of the U.S. and State due to its downstream connection to the Los Angeles River. According to the NWI, this feature is unnamed at the project site.

OHWM Datasheet P01 was completed within the concrete culvert part of unnamed ephemeral channel #1 in the northern part of the study area. The location is within the OHWM bounds for unnamed ephemeral channel #1. The width of the OHWM for P01 was approximately 12 feet and the TOB was approximately 8 feet beyond the OHWM bounds to both the northwest and southeast. The presence of trees that have canopy within TOB extents to both the north and south of P01 has created riparian areas that extend beyond the TOB for unnamed ephemeral channel #1. The OHWM around P01 for unnamed ephemeral channel #1 was dry at the time of the survey.

A Wetland Data Determination Form was not taken for the natural boundaries portion of unnamed ephemeral channel #1 due to a lack of hydrophytic vegetation. The dominant plants there were California sagebrush (UPL), California buckwheat (UPL), coast live oak (UPL), and riggut brome (UPL). The dominance test failed at 0%. A Wetland Data Determination Form was not taken for the culverted concrete portion of unnamed ephemeral channel #1 due to a lack of soils in the concrete channel. The entire span of unnamed ephemeral channel #1 in the study area are non-wetland waters of the U.S. and State.

Unnamed Ephemeral Channel #2

A total of 1,029-linear feet (0.32-acres) of an unnamed ephemeral channel #2 is on the development site including 0.10-acres that are jurisdictional within the OHWM and 0.22-acres that



are jurisdictional between the OHWM and TOB and riparian habitat. Unnamed ephemeral channel #2 originates near a soil berm east of unnamed ephemeral channel #1. Unnamed ephemeral channel #2 traverses south and becomes culverted with concrete along the east side of the existing Sequoia building (Photo 21). Unnamed ephemeral channel #2 traverses south and east within the study area and is not classified by the NWI. It is *not* considered a Traditional Navigable Water (TNW) per Section 404 of the CWA; however, its confluence with unnamed ephemeral channel #1 changes its jurisdiction to waters of the U.S. and State (Photo 3).

Unnamed ephemeral channel #2 is mostly a culverted concrete channel with side bank walls that are reinforced by limestone masonry. The masonry construct is mostly perpendicular to the topographic plane of the channel; therefore, its OHWM is the same as its TOB – they are the same. The active floodplain for unnamed ephemeral channel #2 is limited to each TOB, respectively; the culvert was designed to maintain water flows to within its construct.

A Wetland Data Determination Form was not taken for the natural boundaries portion of unnamed ephemeral channel #2 due to a lack of hydrophytic vegetation and the concrete soil. The dominant plants there were *Quercus agrifolia* (UPL), red river gum (FAC), and ripgut brome (UPL). The dominance test failed at 33%. A Wetland Data Determination Form was not taken for the culverted concrete portion of unnamed ephemeral channel #2 due to a lack of hydric soils. The entire span of unnamed ephemeral channel #2 in the study area are non-wetland waters of the U.S. and State.

Unnamed Ephemeral Channel #3

A total of 218-linear feet (0.02-acres) of an unnamed ephemeral channel #3 is on the development site including 0.02-acres that are jurisdictional within the OHWM and 0.00-acres that are jurisdictional between the OHWM and TOB and riparian habitat. Unnamed ephemeral channel #3 originates in the study area as a culverted channel underneath Lopez Canyon Road. Unnamed ephemeral channel #3 traverses northwest and west within the study area and is not classified by the NWI. It is not considered a Traditional Navigable Water (TNW) per Section 404 of the CWA; however, its confluence with unnamed ephemeral channel #1 changes its jurisdiction to waters of the U.S. and State (Photo 3).

Unnamed ephemeral channel #3 is a culverted concrete channel with side bank walls that are reinforced by limestone masonry. The masonry construct is mostly perpendicular to the topographic plane of the channel; therefore, its OHWM is the same as its TOB – they are the same. The active floodplain for unnamed ephemeral channel #3 is limited to each TOB, respectively; the culvert was designed to maintain water flows to within its construct.



A Wetland Data Determination Form was not taken for the unnamed ephemeral channel #3 due to a lack of hydric soils. The entire span of unnamed ephemeral channel #3 in the study area are non-wetland waters of the U.S. and State.

Surveyed Trees for Jurisdictional Boundaries

Several coast live oak trees (T1-T14 in Figure 6) were observed during the site visits to help define jurisdictional boundaries for the development site. These trees are associated with channel #1 and are within CDFW jurisdiction because they overhang the streambed. The Oak Tree Survey Report for the project describes these trees and the condition and Figure 6 shows the location of these jurisdictional trees.

Impacts Analysis

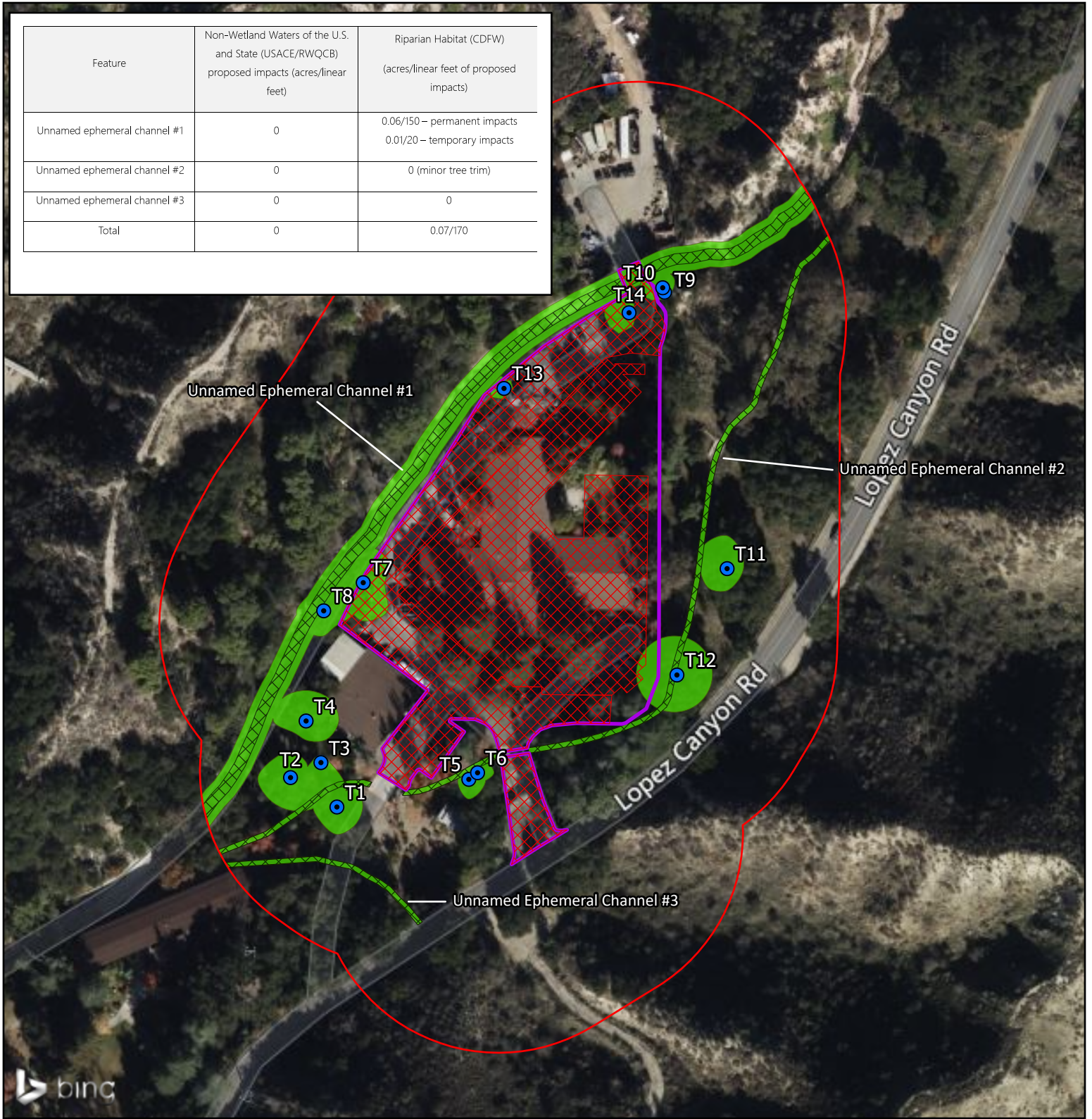
Non-Wetland Waters of the United States (USACE)

As depicted in Figure 7 and summarized in Table 4, there are no anticipated impacts for the development site that include the waters of the U.S. within the OHWM bounds for unnamed ephemeral channel #1, unnamed ephemeral channel #2, or unnamed ephemeral channel #3. The project would be located outside the flow areas and the OHWM. The bridge area over the channel will not impact the flow areas and no dredge or fill, or discharge will occur within waters of the US. The work adjacent to or above the waters will be done during dry times of the year when no water is present, and no water diversion will be necessary. All work materials and equipment will be located outside of the OHWM. The best management practices in the recommendations below will ensure that indirect impacts from erosion or runoff during project construction do not occur.

Table 4. Summary of Temporary Impacts to Jurisdictional Features

Feature	Non-Wetland Waters of the U.S. and State (USACE/RWQCB) proposed impacts (acres/linear feet)	Riparian Habitat (CDFW) (acres/linear feet of proposed impacts)
Unnamed ephemeral channel #1	0	0.06/150 – permanent impacts 0.01/20 – temporary impacts
Unnamed ephemeral channel #2	0	0 (minor tree trim)
Unnamed ephemeral channel #3	0	0
Total	0	0.07/170

Feature	Non-Wetland Waters of the U.S. and State (USACE/RWQCB) proposed impacts (acres/linear feet)	Riparian Habitat (CDFW) (acres/linear feet of proposed impacts)
Unnamed ephemeral channel #1	0	0.06/150 – permanent impacts 0.01/20 – temporary impacts
Unnamed ephemeral channel #2	0	0 (minor tree trim)
Unnamed ephemeral channel #3	0	0
Total	0	0.07/170

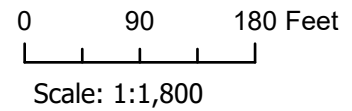


Source: BING Aerial Imagery 2022

Hope Gardens Sequoia Building Project

Figure 7. Impacts to Jurisdictional Resources

- Development Site
- Survey Area (200-Foot buffer)
- Proposed Development Footprint
- Jurisdictional Trees
- USACE/RWQCB Non-Wetland Waters of the US/State
- CDFW Jurisdiction





Wetland Waters of the United States (USACE)

The development site does not contain any wetland waters of the U.S.

Non-Wetland Waters of the State (RWQCB)

The bounds for non-wetland waters of the State under the jurisdiction of RWQCB are identical to the bounds for the non-wetland waters of the U.S. under the jurisdiction of USACE. As depicted in Figure 7 and summarized in Table 4, there are no anticipated impacts for the development site that include the waters of the State within the OHWM bounds for unnamed ephemeral channel #1, unnamed ephemeral channel #2, or unnamed ephemeral channel #3. There will be no direct impact to areas within the OHWM and no dredge or fill, or discharge will occur. The work adjacent to or above the waters will be done during dry times of the year when no water is present, and no water diversion will be necessary. All work materials and equipment will be located outside of the OHWM. The best management practices in the recommendations below will ensure that indirect impacts from erosion or runoff during project construction do not occur.

Wetland Waters of the State (RWQCB)

The development site does not contain any wetland waters of the state.

Streambed, Vegetated Streambed, and Riparian Habitat (CDFW)

As depicted in Figure 7 and summarized in Table 4, the total proposed permanent impacts for the development site include 0.06-acre within CDFW riparian habitat jurisdiction for unnamed ephemeral channel #1 where road resurfacing will be done within the root zone and protected area of jurisdictional oaks. These trees will either be removed entirely or the project will be conducted within greater than 30% of the trees critical root zone and will likely result in the loss of the tree. Additional temporary impacts would occur to 0.01-acre of channel #1 where the new paved road bridge will be constructed over the channel. There will be minor trimming to less than 5% of the canopy of an oak tree associated with drainage channel #2, however, this impact is negligible and will not result in significant damage to the tree or riparian areas.

Recommendations and Conclusion

The proposed impacts to the unnamed ephemeral channel #1 will include 0.06-acre of permanent impacts to oak trees within the riparian zone associated with the channel and 0.01-acre of temporary impacts during demolition and repaving of the bridge over the channel in the northern



section of the development site. The project will avoid dredge or fill within the OHWM and will not result in direct impacts to waters of the US (USACE features) or waters of the state (RWQCB features). Indirect impacts will be avoided by the recommendations below that will ensure no discharge occurs within the OHWM during the project. However, these activities will include altering riparian vegetation permanently, which is an impact to CDFW jurisdictional areas, and the temporary impacts to the bridge over the channel will require temporary impacts to the streambed edges and surrounding vegetation. A CDFW Notification of Lake or Streambed Alteration will be required for these impacts and an application should be submitted via the online portal.

Measures included in the permits should include best management practices to avoid additional indirect impacts to the streambed or water quality. If these measures are implemented then no permits are likely necessary from the USACE and RWQCB, however, concurrence letters from both agencies is recommended to verify that they agree no impacts to these features would result from the project. These mitigation measures should include at a minimum:

- Project activities within 50-ft of drainage features shall be planned when no surface water is present. No work should occur after rain events or when there is forecast of 50% chance of rain.
- The contractor shall clearly delineate the plant removal limits and prohibit any trimming or disturbance outside these boundaries.
- Trimmed materials shall be removed from the development site and disposed of off-site in a responsible manner.
- Project-related vehicles and equipment shall not enter the streambed and when possible, shall be staged at least 50-feet outside of jurisdictional areas on paved surfaces.
- During construction, heavy equipment and vehicles shall be operated in accordance with standard Best Management Practices (BMPs). All equipment used in the workspace shall be properly maintained such that no leaks of oil, fuel, or residues will take place. Provisions shall be in place to remediate any accidental spills.
- Materials shall be stored at least 50-ft from drainage features, as feasible, or equipment will utilize secondary containment.
- Construction parking and staging will occur in previously disturbed and developed areas that are greater than 50-feet from jurisdictional areas.



Compensatory Mitigation

The project impacts are limited to the removal or permanent damage to 6¹ coast live oaks within CDFW riparian areas, and the temporary impacts to a bridge over the channel that will be returned to the existing conditions following the project. The project oak tree report requires that oak trees be planted at a 2:1 for each removal. We recommend replacement plantings of the coast live oaks planned per projects Oak Tree Report and permit be planted along the channels within riparian areas on the Hope Gardens property. This replacement of riparian habitat would be considered suitable compensation for the impacts to riparian trees. Alternative offsite mitigation considered suitable would be through purchase of mitigation credits for impacts to coast live oak riparian woodlands at a 2:1.

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@southernenvironmental.com.

Sincerely,

Matthew R. South

List of Attachments

1. **Attachment A.** Photograph Exhibit
2. **Attachment B.** Arid West Ephemeral and Intermittent Streams OHWM Datasheet
3. **Attachment C.** Site Plan

¹ It should be noted that the project overall will remove 4 oaks and encroach 12 oaks, and the above reference to 6 oaks includes only those trees within the riparian zone that is CDFW jurisdiction per the jurisdictional delineation report.



Bibliography

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- 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. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.



Photo 2. View of unnamed ephemeral channel #1 from its OHWM bounds, facing southwest.



Photo 3. View from unnamed ephemeral channel #1 of its confluences with unnamed ephemeral channel #2 (left) and unnamed ephemeral channel #3 (right), facing northeast.



Photo 4. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.



Photo 5. View of unnamed ephemeral channel #1 from its OHWM bounds, facing southwest.



Photo 6. View of the TOB for unnamed ephemeral channel #1 from its OHWM bounds, facing west.

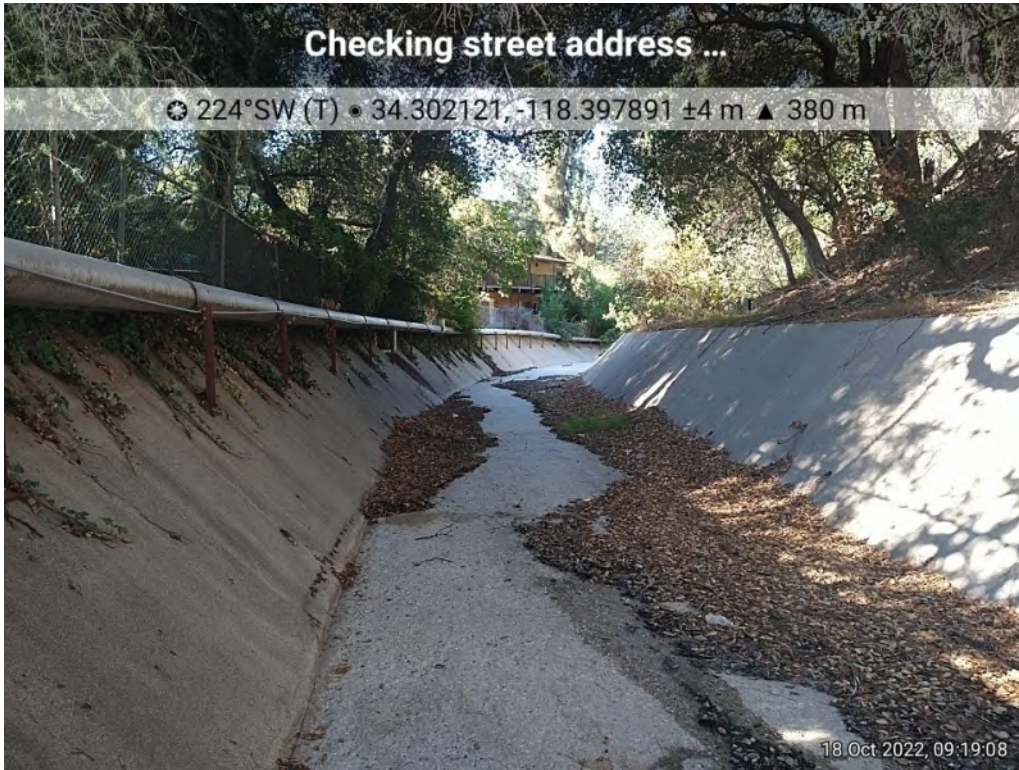


Photo 7. View of unnamed ephemeral channel #1 from its OHWM bounds, facing southwest.



Photo 8. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.



Photo 9. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.



Photo 10. View of unnamed ephemeral channel #1 from its OHWM bounds, facing southwest.



Photo 11. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.



Photo 12. View of unnamed ephemeral channel #1 from its OHWM bounds, facing southwest.



Photo 13. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.



Photo 14. View of unnamed ephemeral channel #1 from its OHWM bounds, facing southwest.

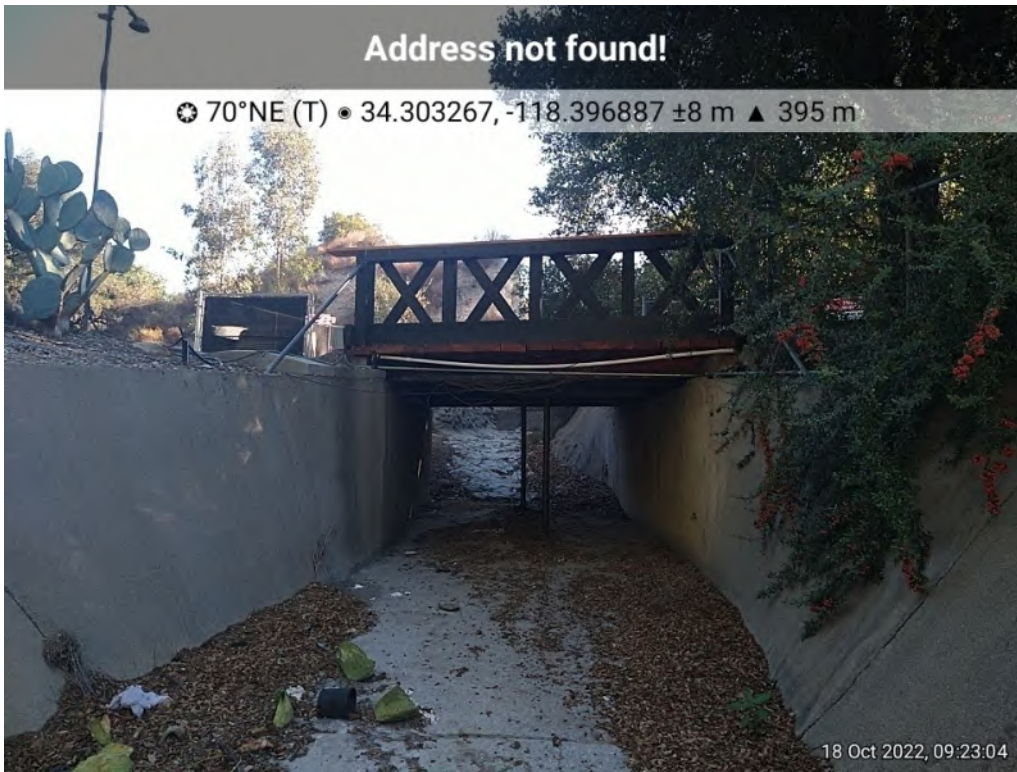


Photo 15. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.

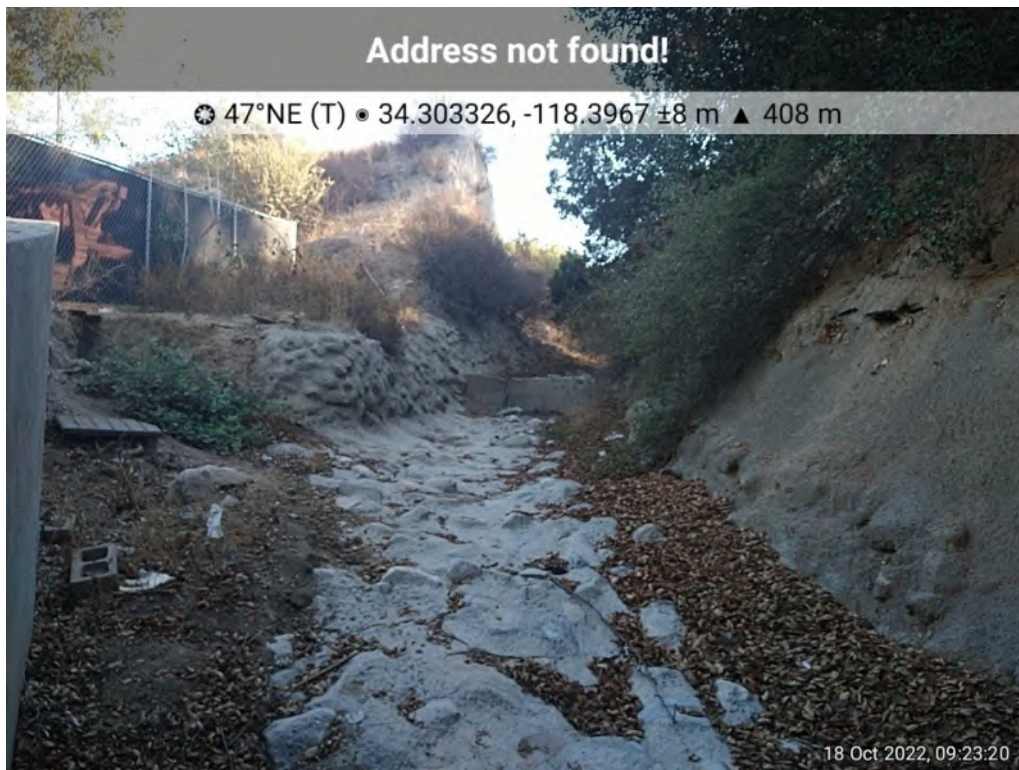


Photo 16. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.



Photo 17. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.

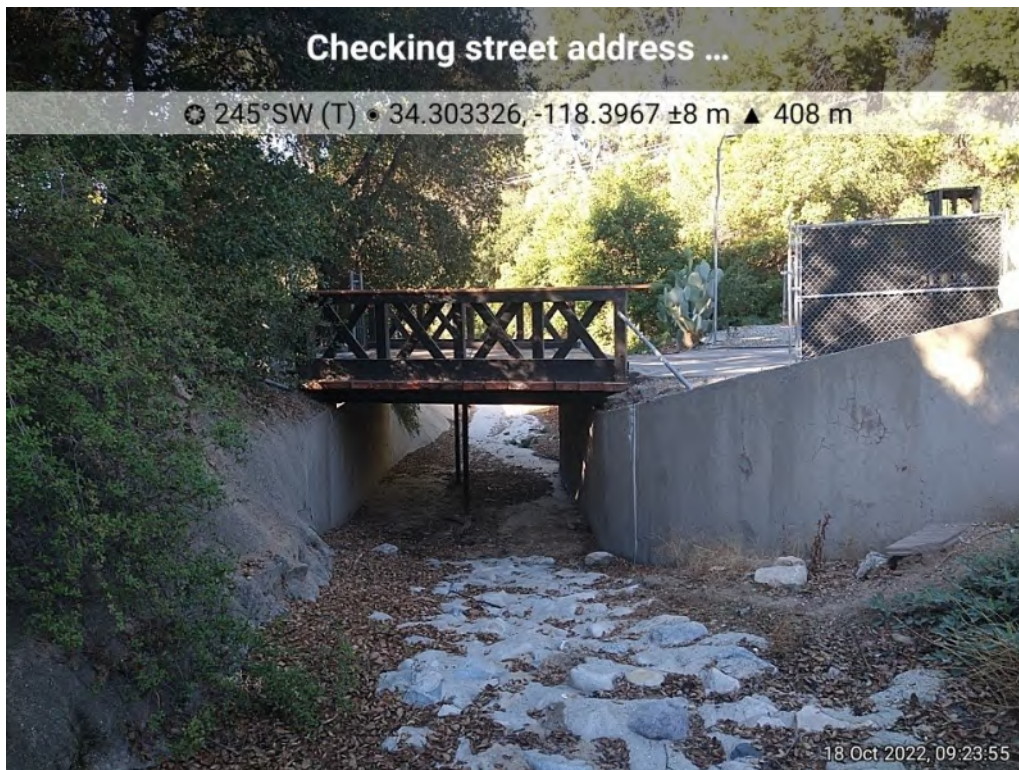


Photo 18. View of unnamed ephemeral channel #1 from its OHWM bounds, facing southwest.



Photo 19. View of unnamed ephemeral channel #1 from its OHWM bounds, facing northeast.



Photo 20. View of unnamed ephemeral channel #1 from just beyond its southeast TOB, facing northeast.

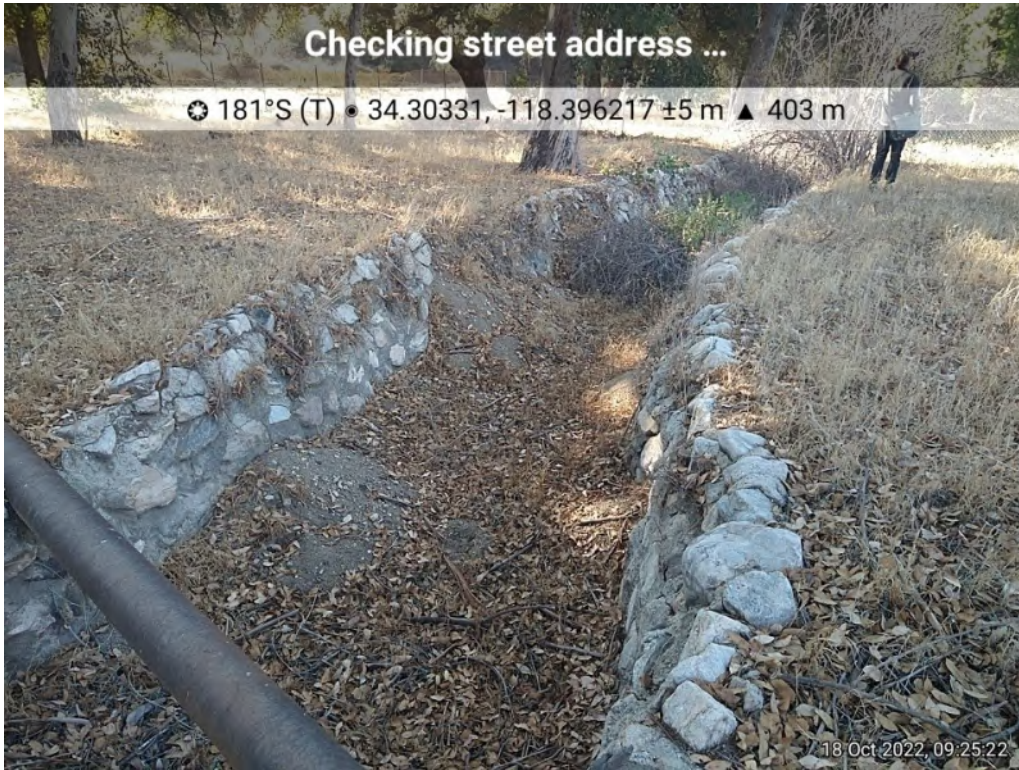


Photo 21. View of unnamed ephemeral channel #2 from its west TOB bounds where it becomes culverted with masonry and concrete, facing south.



Photo 22. View of unnamed ephemeral channel #2 from its west TOB bounds, facing south.

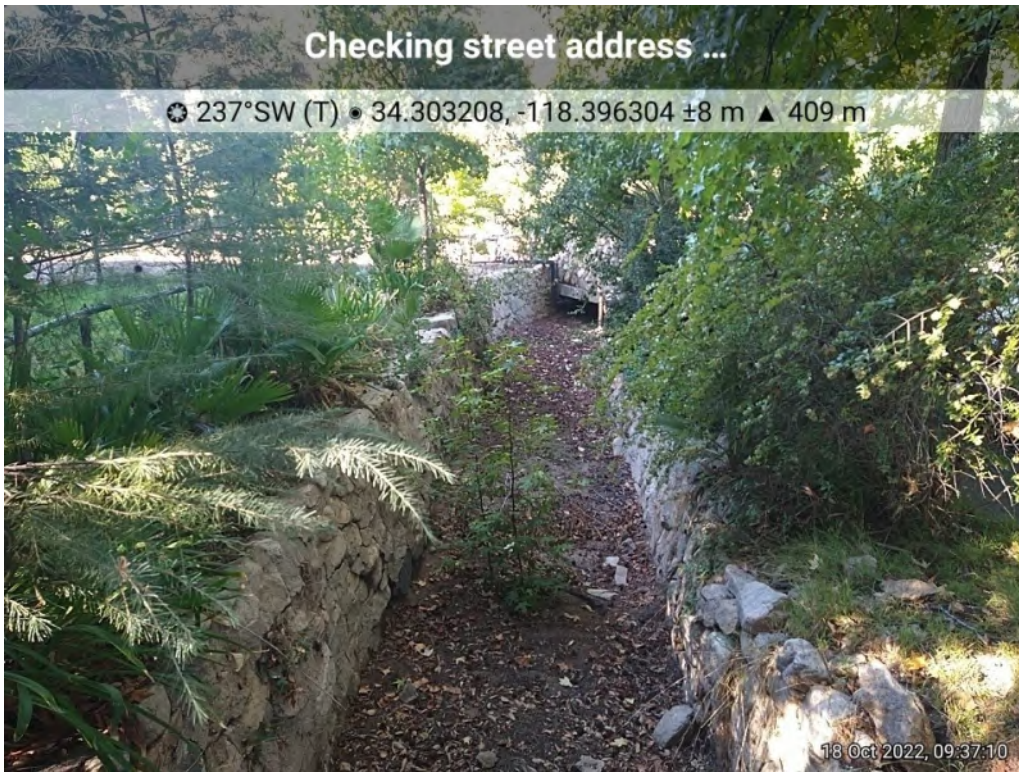


Photo 23. View of unnamed ephemeral channel #2 from its OHWM bounds, facing southwest.



Photo 24. View of unnamed ephemeral channel #2 from where it traverses under a property driveway on the south side of the building, facing west.



Photo 25. View of the property driveway to be re-paved in the proposed development, facing south. Unnamed ephemeral channel traverses under the bridge from left to right.

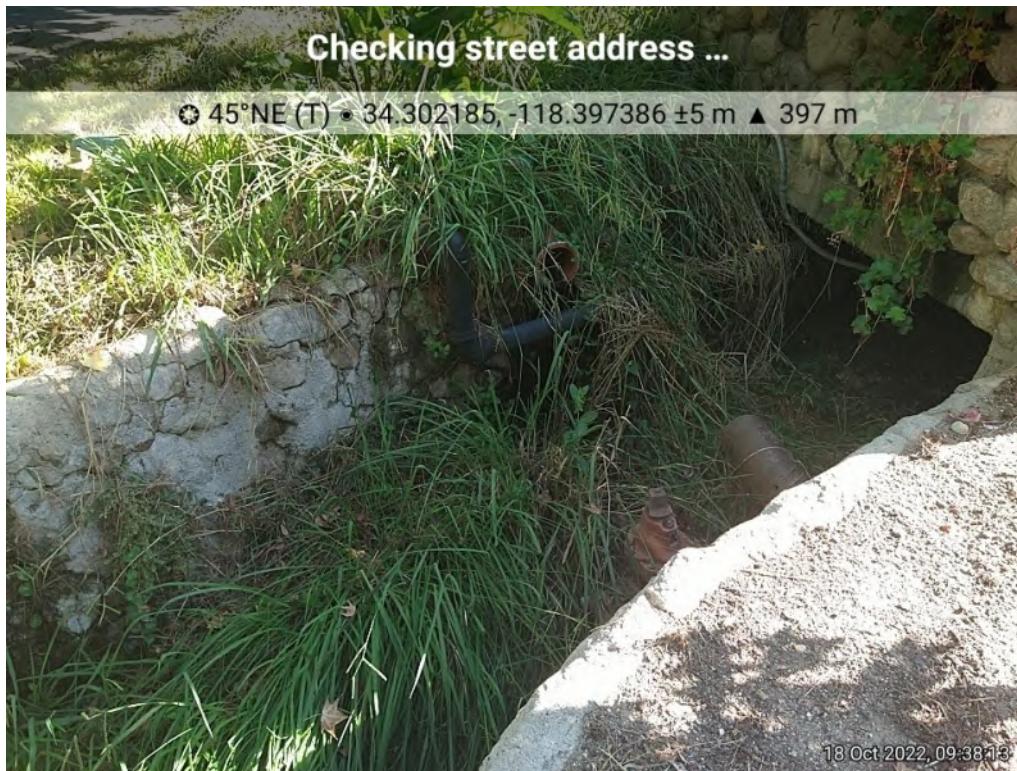


Photo 26. View of unnamed ephemeral channel #2 where it traverses under a property driveway just to the southwest of the project site, facing northeast.



Photo 27. View of unnamed ephemeral channel #2 from just beyond its southern TOB bounds, facing southwest.



Photo 28. View of unnamed ephemeral channel #2 from just beyond its northwest TOB, facing northeast.

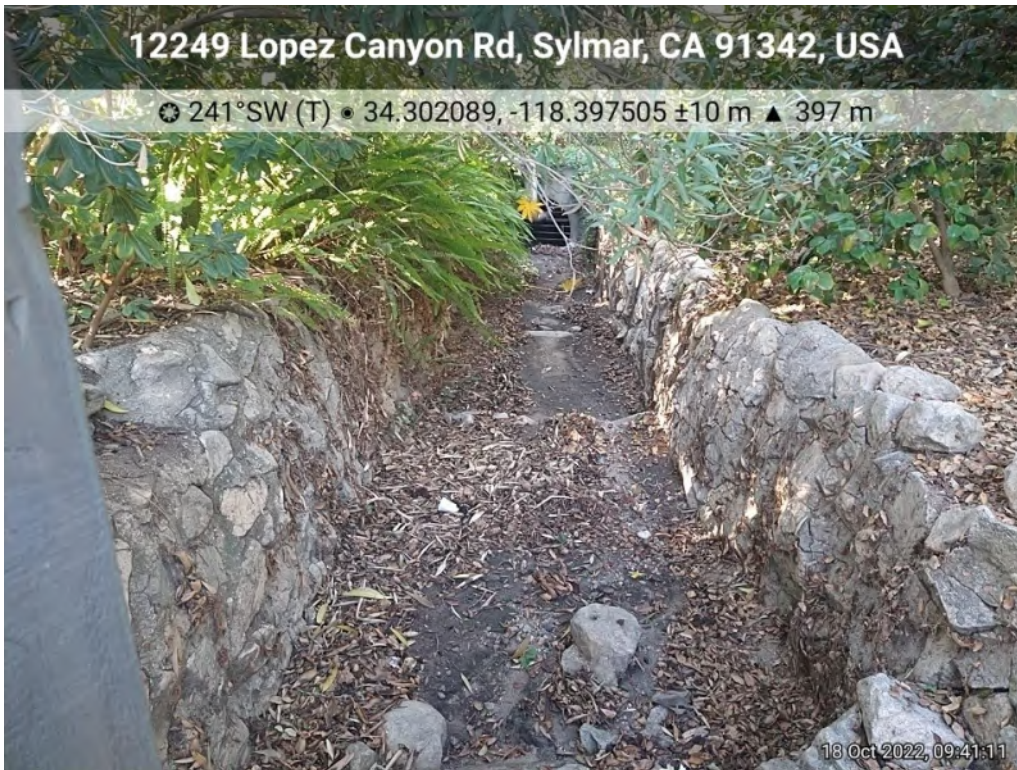


Photo 29. View of unnamed ephemeral channel #2 from its OHWM bounds as it leaves the project site, facing southwest.

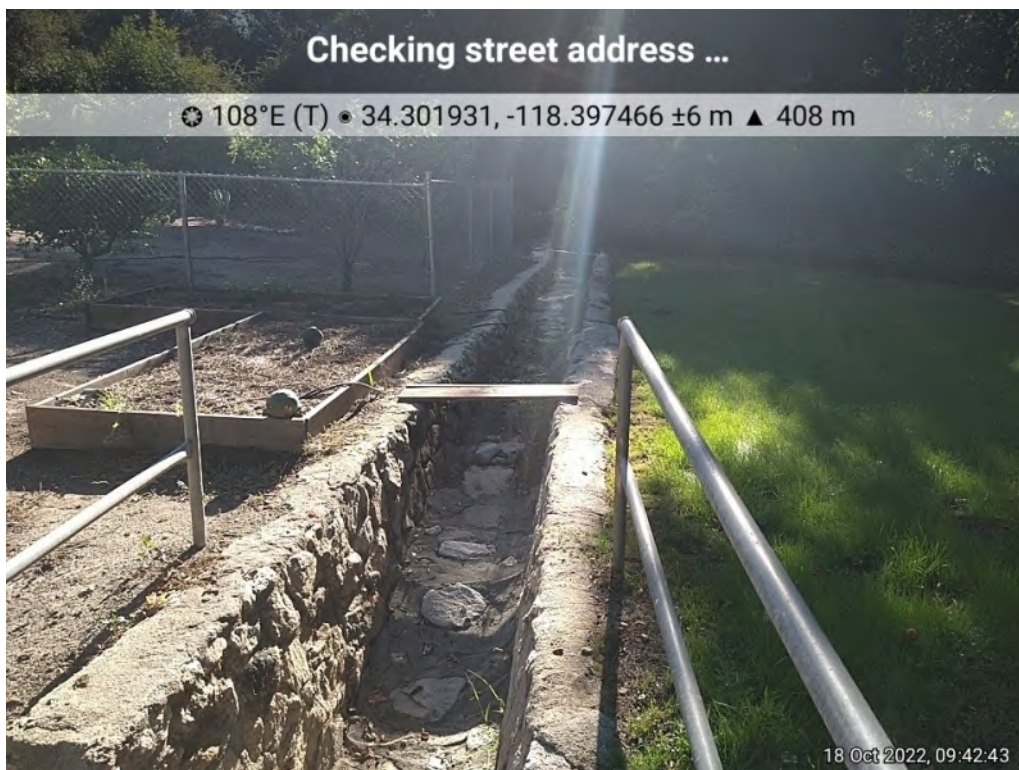


Photo 30. View of unnamed ephemeral channel #3 from its northern TOB boundary, facing east.

Attachment B

Arid West Ephemeral and Intermittent Streams

OHWM Datasheet

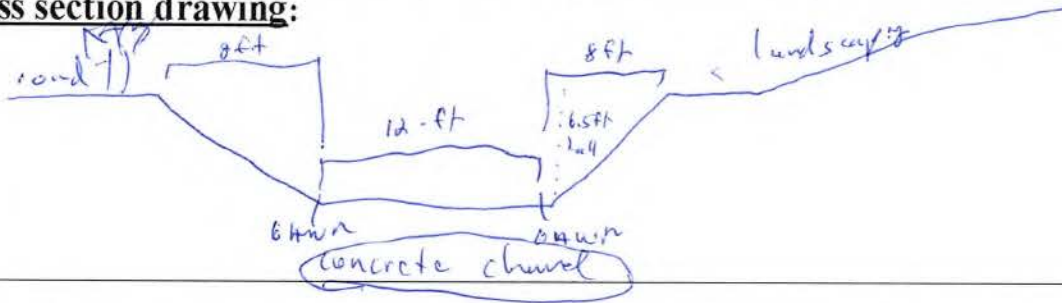
Project ID:

Cross section ID:

Date:

Time:

Cross section drawing:



OHWM

GPS point: _____

Indicators:

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

Comments:

The channel is concrete and OHWM is @ base of concrete channel

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: N/A

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____% Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

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

Indicators:

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

Comments:

Attachment C

Site Plan

