Appendix A

Biological Resources Technical Report

BIOLOGICAL RESOURCES TECHNICAL REPORT
Los Angeles Harbor College West Drainage Improvement Project

Prepared for:

BuildLACCD
1055 Corporate Center Drive
Monterey Park, CA 91754

Prepared by:

Aspen Environmental Group
615 N. Benson Avenue, Suite E
Upland, CA 91786

Last Updated April 2022

Contents

Tables

Attachments

BIOLOGICAL RESOURCES TECHNICAL REPORT: Los Angeles Harbor College West Drainage Improvement Project

ASPEN ENVIRONMENTAL GROUP
April 2022

1.0 Introduction

This report presents the methods and results of a reconnaissance-level biological survey and habitat assessment that was conducted by Aspen Environmental Group (Aspen) for the proposed Los Angeles Harbor College (LAHC) West Drainage Improvement Project (project) on behalf of the Los Angeles Community College District (LACCD). The project will alleviate flooding at LAHC that is resulting from accumulated sediment in an earthen channel along the southwestern edge of campus. This report provides baseline information on biological resources to support LACCD's environmental review of the project. It also provides a baseline aquatic habitat and resource summary.

1.1 Project Description

LACCD proposes to construct a concrete-lined flood control channel to alleviate flooding on the campus of LAHC. The project will include vegetation removal, grading of the new channel alignment, construction of a new concrete channel, and construction of a fence on top of the southern channel wall. The channel will tie into an exist storm drain at the upstream end of the project site and rock will be placed at the downstream end of the project site to dissipate energy from storm flows before the flows enter an existing natural channel that discharges to Machado Lake. In addition to the channel construction, additional vegetation will be cleared to facilitate construction staging and project access. The entire project site may be impacted by temporary project impacts, but permanent impacts will be limited to the new channel alignment.

1.2 Project Location

The project site is located on the west side of LAHC on land owned by LAHC, the City of Los Angeles, and the Los Angeles Department of Water and Power (LADWP), however concrete channel, fence, and the rock at to be placed at the end of the channel will be entirely on land owned by LAHC. More specifically, the proposed channel is located west of Campus Drive, south of Harbor Parks Golf Course and the land formally used for the LAHC Golf Practice Range, and east of Machado Lake (see Figure 1, Attachment 1). The project site is shown on the Torrance United States Geological Survey (USGS) 7.5-minute topographic quads. Elevation of the project sites ranges from approximately 15 to 25 feet above mean sea level. Most surrounding lands to the west and south are natural open space and to the north and east are developed.

2.0 Methods

2.1 Literature Review

Prior to conducting the field surveys, Aspen biologists reviewed available literature to identify special-status biological resources known from the vicinity. The literature and databases listed below were reviewed.

- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) for the project site (USFWS, 2022).
- CNDDB (CDFW 2021a) for the following 7.5-minute USGS topographic quads: Long Beach, South Gate, Inglewood, Venice, Redondo Beach, Torrance, and San Pedro;
- CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2021), for the same topographic quads;

The CNDDB results are listed in Attachment 2 and the IPaC Resource List is provided as Attachment 3.

2.2 Field Surveys

Aspen biologist Justin Wood visited the project sites on July 21st with project manager, Daniel Apt, from Olaunu. During the site visit, Mr. Wood conducted a 100 percent coverage biological survey of the project site. During the field surveys, all plant and wildlife species observed were recorded in field notes and sensitive species locations were recorded using hand-held GPS units. All plant and wildlife species observed during the surveys are listed in Attachment 4.

The botanical surveys were conducted in near conformance with California Department of Fish and Wildlife guidelines (CDFW 2018). The surveys were (a) conducted during flowering seasons for the special status plants known from the area, (b) floristic in nature, (c) consistent with conservation ethics, (d) systematically covered all habitat types on the sites, and (e) well documented by this report and by voucher specimens to be deposited at Rancho Santa Ana Botanic Garden and other herbaria. Plants of uncertain identity were collected and identified later using keys, descriptions, and illustrations in Baldwin et al. (2012). The survey was conducted during July which is a slightly later date than preferred but all plants, including those that were past flowering were identified to species.

Rainfall: Average annual rainfall recorded at the Los Angeles County Public Works Rolling Hills weather station, located approximately 3 miles to the southwest, is 13.63 inches (34.62 cm; Los Angeles County Public Works, 2021). Seasonal rainfall variability is extremely high in the region and during the 2020-2021 rainfall year 4.66 inches (11.83 cm) was recorded in the region, about 34% of the average rainfall for this station (Los Angeles County Public Works, 2021).

Vegetation

Vegetation maps were prepared by drawing tentative vegetation-type boundaries onto high-resolution aerial images during the site visit, then digitizing these boundaries into ArcGIS (Version 10.7). Vegetation in the study area was difficult to distinguish on aerial images due to homogeneous vegetation structure throughout much of the site. The smallest mapping unit was approximately 0.10 acre. Any vegetation map is subject to imprecision for several reasons:

- Vegetation types tend to intergrade on the landscape so that there are no true boundaries in the vegetation itself. In these cases, a mapped boundary represents best professional judgment.
- Vegetation types as they are named and described tend to intergrade; that is, a given stand of real-world vegetation may not fit into any named type in the classification scheme used. Thus, a mapped and labeled polygon is given the best name available in the classification, but this name does not imply that the vegetation unambiguously matches its mapped name.

- Vegetation tends to be patchy. Small patches of one named type are often included within mapped polygons of another type. The size of these patches varies, depending on the minimum mapping units and scale of available aerial imagery.

3.0 Results

Based upon review of the literature, databases, and field surveys identified above, Aspen biologist Justin Wood compiled a list of special-status species that are present or may be found in the project vicinity. Plant and wildlife species classified as one or more of the following are considered special-status species in this report:

- Listed, proposed for listing, or candidates for listing as threatened or endangered under the federal Endangered Species Act (ESA);
- Listed as threatened or endangered, or candidates for listing under the California Endangered Species Act (CESA);
- Plants listed as rare under the California Native Plant Protection Act;
- Meet the definition of rare or endangered under CEQA § 15380 (b) and (d);
- Considered special-status species in local or regional plans, policies, or regulations.

Several special-status plants and animals identified during the literature review have no potential for occurrence in the survey areas because they occur at higher elevations, are outside of the geographic range, or are found only in specialized native habitats (e.g., wetlands, riparian, or aeolian sands) that are not present. These species are listed in Table 1 but are not addressed further in this report.

Table 1. Special-Status Species Not Addressed[1]

Latin Name	Common Name	Reason for Exclusion
PLANTS		
Aphanisma blitoides	Anaphanisma	No coastal bluff or coastal scrub habitat.
Astragalus hornii var. *hornii*	Horn's milk vetch	No alkali playa or saltbush scrub habitat.
Astragalus pycnostachyus var. *lanosissimus*	Ventura Marsh milk-vetch	No coastal saltmarsh habitat.
Astragalus tener var. *titi*	Coastal dunes milk-vetch	No coastal dune habitat.
Atriplex coulteri	Coulter's saltbush	No alkali playa or saltbush scrub habitat.
Atriplex pacifica	South coast saltscale	No alkali playa or saltbush scrub habitat.
Atriplex parishii	Parish's brittlescale	No alkali playa or saltbush scrub habitat.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	No alkali playa or saltbush scrub habitat.
Centromedia pungens ssp. *laevis*	Smooth tarplant	No alkali playa or saltbush scrub habitat.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	No coastal dune habitat.
Chenopodium littoreum	Coastal goosefoot	No coastal dune habitat.
Chloropyron maritimum ssp. *maritimum*	Salt marsh bird's-beak	No coastal saltmarsh habitat.
Chorizanthe parryi var. *fernandina*	San Fernando Valley spineflower	No coastal sage scrub habitat.
Crossosoma californicum	Catalina crossosoma	No coastal sage scrub or chaparral habitat.
Dithyrea maritima	Beach spectaclepod	No coastal dune habitat.
Dudleya virens ssp. *insularis*	Island green dudleya	No coastal bluff or coastal scrub habitat.
Eryngium aristulatum var. *parishii*	San Diego button-celery	No vernal pool habitat.
Horkelia cuneata var. *puberula*	Mesa horkelia	No suitable alluvial scrub or sandy sage scrub habitat.

Table 1. Special-Status Species Not Addressed[1]

Latin Name	Common Name	Reason for Exclusion
Isocoma menziesii var. *decumbens*	Decumbent goldenbush	No coastal saltmarsh habitat.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	No vernal pool or coastal playa habitat.
Lycium brevipes var. *hassei*	Santa Catalina Island desert-thorn	No coastal bluff or coastal scrub habitat.
Nama stenocarpa	Mud nama	No vernal pool habitat.
Navarretia fossalis	Spreading navarretia	No vernal pool habitat.
Navarretia prostrata	Prostrate vernal pool navarretia	No vernal pool habitat.
Nemacaulis denudata var. *denudata*	Coast woolly-heads	No coastal dune habitat.
Orcuttia californica	California Orcutt grass	No vernal pool habitat.
Pentachaeta lyonii	Lyon's pentachaeta	No heavy soil sage scrub habitat.
Phacelia stellaris	Brand's star phacelia	No coastal dune habitat.
Potentilla multijuga	Ballona cinquefoil	No coastal saltmarsh habitat.
Sidalcea neomexicana	Salt spring checkerbloom	No suitable freshwater wetland habitat.
Suaeda esteroa	Estuary seablite	No coastal bluff or coastal scrub habitat.
Symphyotrichum defoliatum	San Bernardino aster	No suitable freshwater wetland habitat.
INVERTEBRATES		
Brennania belkini	Belkin's dune tabanid fly	No coastal dune habitat.
Cicindela hirticollis gravida	Sandy beach tiger beetle	No coastal dune or strand habitat.
Cicindela latesignata latesignata	Western beach tiger beetle	No coastal dune or strand habitat.
Cicindela senilis frosti	Senile tiger beetle	No suitable mudflat or wetland habitat.
Coelus globosus	Globose dune beetle	No coastal dune habitat.
Eucosma hennei	Henne's eucosman moth	No coastal dune habitat.
Eugnosta busckana	Busck's gallmoth	No coastal dune or strand habitat.
Euphilotes battoides allyni	El Segundo blue butterfly	No coastal dune habitat.
Glaucopsyche lygdamus paloverdesensis	Palos Verdes blue butterfly	No coastal bluff or coastal scrub habitat.
Glyptostoma gabrielense	San Gabriel chestnut	No suitable oak woodland or scrub habitat.
Gonidea angulata	Western ridged mussel	No perennial creek or river habitat.
Habroscelimorpha gabbii	Western tidal-flat tiger beetle	No suitable tidal flats.
Onychobaris langei	Lange's El Segundo Dune weevil	No coastal dune habitat.
Panoquina errans	Wandering (=saltmarsh) skipper	No coastal saltmarsh habitat.
Rhaphiomidas terminatus terminatus	El Segundo flower-loving fly	No coastal dune habitat.
Streptocephalus woottoni	Riverside fairy shrimp	No vernal pool habitat.
Trigonoscuta dorothea dorothea	Dorothy's El Segundo Dune weevil	No coastal dune or strand habitat.
Tryonia imitator	Mimic tryonia (=California brackishwater snail)	No coastal saltmarsh habitat.
FISH		
Siphateles bicolor mohavensis	Mohave tui chub	Well outside of geographic range.
AMPHIBIANS		
Spea hammondii	Western spadefoot	No vernal pool habitat.
REPTILES		
Emy marmorata	Western pond turtle	No suitable ponded water habitat.
Phrynosoma blainvilli	Coast horned lizard	No suitable scrub habitat.
BIRDS		
Charadrius nivosus nivosus	Western snowy plover	No coastal dune or strand habitat.

Table 1. Special-Status Species Not Addressed[1]

Latin Name	Common Name	Reason for Exclusion
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	No suitable dense riparian habitat.
Coturnicops noveboracensis	Yellow rail	No suitable marsh or wetland habitat.
Empidonax traillii extimus	Southwestern willow flycatcher	No suitable dense riparian habitat.
Laterallus jamaicensis coturniculus	California black rail	No suitable marsh or wetland habitat.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	No coastal saltmarsh habitat.
Pelecanus occidentalis californicus	California brown pelican	No suitable aquatic habitat.
Polioptila californica californica	Coastal California gnatcatcher	No suitable coastal sage scrub habitat.
Riparia riparia	Bank swallow	No suitable riparian habitat or nest sites.
Sternula antillarum browni	California least tern	No coastal dune or strand habitat.
MAMMALS		
Microtis californicus stephensi	South coast marsh vole	No coastal saltmarsh habitat.
Neotoma lepida intermedia	San Diego woodrat	No suitable midden sites.
Perognathus longimembris pacificus	Pacific pocket mouse	No suitable coastal sage scrub habitat.
Sorex ornatus salicornicus	Southern California saltmarsh shrew	No coastal saltmarsh habitat.

Note:
[1] Special-status species reported from the region, but not addressed in this report due to habitat or geographic range.

Table 2 lists all special-status plants and animals known from comparable habitats within the region and summarizes their habitat, distribution, conservation status, and probability of occurrence on the site (based on geographic and elevational ranges, habitat conditions, and proximity to known locations).

Table 2. Special-Status Species Addressed

Species Name	Habitat Requirements	Flowering or Activity Season	Conservation Status	Potential to Occur
PLANTS				
Centromedia parryi ssp. *australis* Southern tarplant	Annual herb; marsh and swamp margins, vernal pools, and vernally mesic valley and foothill grasslands; below 1600 ft. elev.	May-Nov	Fed ESA: none CA: S2, 1B.1	Moderate; not observed, marginally suitable habitat present, known within or immediately adjacent to the project site.
Juglans californica Southern California black walnut	Alluvial habitat; chaparral, cismontane woodland, coastal scrub, riparian woodland Approx. 160-3000 ft. elev.	Year-around	Fed ESA: none CA: none CRPR: 4.2	Low: conspicuous tree not observed during survey, know from the vicinity of the project site.
INVERTEBRATES				
Bombus crotchii Crotch bumble bee	Colonial insect; open grassland and scrub; underground colonies, often in old rodent burrows. Many food plants including *Chaenactis, Lupinus, Phacelia, Salvia*, and *Eriogonum*. Much of southern and central CA, SW Nevada and Baja.	Spring – Summer	Fed ESA: none CA: S1S2	Low; not observed, suitable habitat and food plants present but scarce; historical records from within 3 miles.

Table 2. Special-Status Species Addressed

Species Name	Habitat Requirements	Flowering or Activity Season	Conservation Status	Potential to Occur
Danaus plexippus pop. 1 Monarch – California overwintering population	Insect: occurs through much of California and requires milkweeds for caterpillar food. Overwinters in Eucalyptus and other trees along the immediate coast.	Winter	Fed ESA: **Candidate** CA: S2S3	Low; not observed but suitable wintering roost trees present, unlikely to form new overwintering populations.
REPTILES				
Anniella stebbinsi Southern California legless lizard	Generally, south of the Transverse Range, south to NW Baja Calif. Sandy or loose loamy soils under sparse vegetation; soils typically have high moisture content.	Year-around	Fed ESA: none CA: S3, SC	Low: marginally suitable habitat present, known from within about 3 miles of the project site.
BIRDS				
Accipiter cooperii Cooper's hawk	Nests in forest and woodland, hunts in woods and open areas; breeds through most of US, winters south through Mexico.	Year-around	Fed ESA: none CA: S4 (nesting)	Nesting: moderate in project site. Winter/Migration: high in the project site.
Agelaius tricolor Tricolored blackbird	Nests in marshes, wetlands, and occasionally agricultural fields and grasslands. Once widespread in CA, now limited to the San Joaquin Valley and a few outlying populations.	Year-around	Fed ESA: none CA: **THR**, S1S2	Low; not observed, suitable habitat present just to the west of the project site, known from Machado Lake.
Athene cunicularia Burrowing owl	Nests mainly in rodent burrows, usually in open grassland or shrubland; forages in open habitat; increasingly uncommon in S Calif.; through W US and Mexico	Year-around	Fed ESA: none CA: S3, SC (burrow sites)	Low; limited suitable habitat in the project site, one 1989 record from Machado Lake.
Haliaeetus leucocephalus Bald eagle	Nests around lakes and reservoir in so. CA. Also historically nested on coastal and island cliffs. Forages on fish. Widespread throughout N. America.	Year-around	Fed ESA: Delisted CA: **END**, S3	Nesting: minimal in project site. Winter/Migration: moderate, known from Machado Lake.
Icteria virens Yellow-breatsed chat	Riparian forests and woodlands, typically in dense thickets; summer resident of so. CA. and scattered locations in northern CA.; typically, below above 4,500 ft. elev.	Spring-Summer	Fed ESA: none CA: SSC, S3	Low: marginally suitable nesting habitat, suitable foraging habitat, known from Machado Lake.
Setophaga petechia Yellow warbler	Breeds in willow and cottonwood riparian habitat throughout much of southern California; winters Mexico to S America.	Spring-Summer	Fed ESA: none CA: SSC, S2	Moderate: marginally suitable nesting habitat, suitable foraging habitat, known from Machado Lake.
Vireo bellii pusillus Least Bell's vireo	Riparian vegetation; prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. Throughout much of southern Calif. Spring-summer.	Spring-Summer	Fed ESA: **END** CA: **END** S2,	Low: marginally suitable nesting habitat, suitable foraging habitat, known from Machado Lake.

Table 2. Special-Status Species Addressed

Species Name	Habitat Requirements	Flowering or Activity Season	Conservation Status	Potential to Occur
MAMMALS				
Eumops perotis californicus Western mastiff bat	Lowlands (with rare exceptions); cent. and S Calif., S Ariz., NM, SW Tex., N Mexico; roost in deep rock crevices, forage over wide area; recorded in 2016 at nearby wind site.	Year-around	Fed ESA: none CA: S3S4, SC	Low: suitable foraging habitat present only, nearest known occurrence about 8 miles north of the project site.
Lasionycteris noctivagans Silver-haired bat	Much of N America, except warm and arid regions; migratory; winter range expands to south; forests, esp. near water; hibernates in trees, buildings, crevices	Spring-Summer	Fed ESA: none CA: S3S4	Low: suitable foraging habitat present only, nearest known occurrence about 5 miles north of the project site.
Nyctinomops femorosaccus Pocketed free-tailed bat	Deserts and arid lowlands, SW US, Baja Calif., mainland Mexico; Roost mainly in crevices of high cliffs; forage over water and open shrubland	Spring-Summer	Fed ESA: none CA: S3, SC	Moderate: suitable foraging habitat present only, nearest known occurrence about 2.0 miles of the project site.
Nyctinomops macrotis Big free-tailed bat	Roosts in crevices of rocky cliffs, scattered localities in W N. Amer. through Cent. Amer.; ranges widely from roost sites; often forages over water	Spring-Summer	Fed ESA: none CA: S3, SC	Low: suitable foraging habitat present only, nearest known occurrence about 7 miles north of the project site.
Taxidea taxus American badger	Mountains, deserts, interior valleys where burrowing animals are avail as prey and soil permits digging; through-out central and W N America.	Year – round	Fed ESA: none CA: S3, SC	Low; suitable habitat present; no sign observed during the surveys.

Notes:

General references (botany): Baldwin et al. 2012; CDFW 2021a, CNPS 2021; CCH 2021
General references (wildlife): American Ornithologists Union 1998 (including supplements through 2011); Barbour and Davis 1969; CDFW 2021a; Feldhammer et al. 2003; Gannon 2003; Garrett and Dunn 1981; Grinnell and Miller 1944; Hall 1981; Hatfield et al. 2015; Jennings and Hayes 1994; Pierson and Rainey 1998; Sibley 2000; Stebbins 2003; Wilson and Ruff 1999.

Conservation Status

Federal designations: (federal ESA, USFWS).
END: Federally listed, endangered.
THR: Federally listed, threatened.
Candidate: Sufficient data are available to support federal listing, but not yet listed.
Proposed: Formally proposed for federal status shown.

Federal designations: (federal Bald and Golden Eagle Protection Act, US Fish and Wildlife Service).
Eagle Protection Act: Bald and Golden Eagle Protection Act.

***State designations*:** (CESA, CDFW)
END: State listed, endangered.
THR: State listed, threatened.
RARE: State listed as rare (applied only to certain plants).
SC: California species of special concern. Considered vulnerable to extinction due to declining numbers, limited geo-graphic ranges, or ongoing threats.
FP: Fully protected. May not be taken or possessed without permit from CDFW.

CDFW Natural Diversity Data Base Designations: Applied to special-status plants and sensitive plant communities; where correct category is uncertain, CDFW uses two categories or question marks.
S1: Fewer than 6 occurrences or fewer than 1000 individuals or less than 2000 acres.
S1.1: Very threatened

S1.2: Threatened
S1.3: No current threats known
S2: 6-20 occurrences or 1000-3000 individuals or 2000-10,000 acres (decimal suffixes same as above).
S3: 21-100 occurrences or 3000-10,000 individuals or 10,000-50,000 acres (decimal suffixes same as above).
S4: Apparently secure in California; this rank is clearly lower than S3, but factors exist to cause some concern, i.e., there is some threat or somewhat narrow habitat. No threat rank.
S5: Demonstrably secure or ineradicable in California. No threat rank.
SH: All California occurrences historical (i.e., no records in > 20 years).
SX: Presumed extirpated in California.

California Native Plant Society (CNPS) Rare Plant Rank designations. Note: According to CNPS (http://www.cnps.org/cnps/rareplants/ranking.php), plants ranked as CRPR 1A, 1B, and 2 meet definitions as threatened or endangered and are eligible for state listing. That interpretation of the state Endangered Species Act is not in general use.

1A: Plants presumed extinct in California.
1B: Plants rare and endangered in California and throughout their range.
2: Plants rare, threatened or endangered in California but more common elsewhere in their range.
3: Plants about which we need more information; a review list.
4: Plants of limited distribution; a watch list.

California Rare Plant Rank Threat designations:

.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Fairly endangered in California (20-80% occurrences threatened)
.3 Not very endangered in California (<20% of occurrences threatened, or no current threats known)

Definitions of occurrence probability: Estimated occurrence probabilities based literature sources cited earlier and field surveys and habitat analyses reported here.

Present: Observed on the site by qualified biologists.
High: Habitat is a type often utilized by the species and the site is within the known range of the species.
Moderate: Site is within the known range of the species and habitat on the site is a type occasionally used.
Low: Site is within the species' known range but habitat is rarely used, or the species was not found during focused surveys covering less than 100% of potential habitat or completed in marginal seasons.

3.1 Special-Status Plants

Listed Threatened or Endangered Plants

This section describes plant species reported from the region that are listed as threatened or endangered under the federal ESA or CESA and have a potential to be present. Although nine federally and/or state listed endangered plants were identified in the literature review, none of these species were found on the project site or have a potential to be present. The project site lacks suitable habitats for all of these species.

Other Special-Status Plants

In addition to the federal and state endangered species regulations noted above, the CDFW and CNPS maintain lists of plants of conservation concern. The CDFW compiles these species including CDFW and CNPS rankings as CRPR 1, 2, 3, or 4 in its compendium of "Special Plants" (CDFW 2021b). These plants are treated here as "special-status species." No special-status plants were observed during the survey but southern tarplant has been previously observed near the western end of the project site and is discussed below.

Southern tarplant. Southern tarplant has a CRPR of 1B.1 and it is an annual in the Asteraceae family (CDFW, 2021a). It grows in a variety of coastal habitats including coastal marshes, coastal playas, and other low-lying coastal areas. It typically grows in intact natural areas but can also grow in the more disturbed areas around the perimeter of the intact natural areas. It is known from nearly 100 occurrences from San Diego to Santa Barbara Counties. Southern tarplant was not observed on the project site but

was previously mapped along the western edge of the project site. Although not observed during the survey, plants may be present in future years of at least average rainfall.

3.2 Special-Status Wildlife

Listed Threatened or Endangered Wildlife

This section includes species listed as threatened or endangered under CESA or ESA. No listed threatened or endangered species have been observed in or immediately adjacent to the project sites. Most of the listed species of the region have been excluded from this report because the project site is outside of their geographic range or their required habitat is absent from the project site (i.e., vernal pools). The site also lacks suitable aquatic habitat or spawning habitat for any listed aquatic species. These species are addressed in Table 1 and are not addressed further in this report.

Species Protected Under the Federal Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. §§ 668-668d; BGEPA) prohibits take of bald eagles and golden eagles. The BGEPA defines *take* to include "pursuing, shooting, shooting at, poisoning, wounding, killing, capturing, trapping, collecting, molesting, and disturbing." The USFWS (2007) further defines *disturb* as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Bald Eagle. Bald eagles are year-round residents throughout most of their range in the western United States. In the southwest, they are more common during winter when young eagles disperse or eagles from outside the region overwinter in the area. In southern California, bald eagles generally nest in large trees near lakes and reservoir and historically nested on cliffs near the Pacific Ocean. Bald eagles are specialized predators that feed primarily on fish. Bald eagles have been reported from Machado Lake several times and are likely to forage there (ebird.org, 2021). The nearest known nest site is known from the San Gabriel Mountains, more than 35 miles north of the project site. There is a moderate potential for bald eagle for fly over the site or perch in a tree on the site but there is little potential for nesting or foraging on the site.

Other Special-Status Wildlife Species

In addition to the federal and state statutes and policies described above, the CDFW maintains a list of wildlife species of conservation concern. The CDFW compiles these in its compendium of "Special Animals" (2021c). These species are referred to as "special-status species" throughout this report.

Yellow warbler. Yellow warbler is a migratory species, occurring in California only during the breeding season, which is typically between April and August. In California, it is widespread in riparian habitat throughout much of the state. It typically nests in dense riparian vegetation near watercourses (CDFW, 2021a). Yellow warbler have been previously detected in riparian habitat around Machado Lake on many occasions (ebirg.org 2021). There is a moderate potential that this species could be present in the sparse Gooding's willow - red willow riparian woodland and forest within the project site.

Bats. Four bats were determined to have at least a low potential to be present on the project site. Only one of these, pocketed free-tailed bat (*Nyctinomops femorosaccus*), has a moderate potential to be present on the project site based on the habitat present and a record within about two miles of the project

site. Pocketed free-tailed bat has a moderate potential to forage over the project site or to roost in the trees within the project site.

Other Special-status Birds. Cooper's hawk is a fairly common raptor found throughout urban southern California. Cooper's hawks frequently forage and nest in parks and other urban-interface areas (CDFW, 2021a). Cooper's hawk have been observed at Machado Lake dozens of times, including one observation within about 500 feet for the project site. Cooper's hawk is a "Watch List" wildlife species and is not afforded specific protection under either state or federal regulations.

3.3 Native Birds: Migratory Bird Treaty Act / California Fish and Game Code

The federal MBTA prohibits take of any migratory bird, including their eggs or active nests, except as permitted by regulation (e.g., licensed hunting of waterfowl or upland game species). Under the MBTA, "migratory bird" is broadly defined as "any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle" and thus applies to most native bird species. California Fish and Game Code Section 3503 prohibits take, possession, or needless destruction of bird nests or eggs; Section 3503.5 prohibits take or possession of birds of prey or their eggs; and Section 3513 prohibits take or possession of any migratory nongame bird. With the exception of a few non-native birds such as European starling, the take of any birds or loss of active bird nests or young is regulated by these statutes. Most of these species have no other special conservation status as defined above.

The IPaC Resource List (Attachment 3), also identified several birds that are USFWS Birds of Conservation Concern and other species that may warrant special attention but otherwise have no formal projection. These species are also protected under the MBTA and California Fish and Game Code and include the following species:

- Allen's Hummingbird (*Selasphorus sasin*)
- Bald Eagle (*Haliaeetus leucocephalus*)
- Black Oystercatcher (*Haematopus bachmani*)
- Black Skimmer (*Rynchops niger*)
- Black Swift (*Cypseloides niger*)
- Black Tern (*Chlidonias niger*)
- Black Turnstone (*Arenaria melanocephala*)
- California Thrasher (*Toxostoma redivivum*)
- Clark's Grebe (*Aechmophorus clarkii*)
- Common Yellowthroat (*Geothlypis trichas sinuosa*)
- Lawrence's Goldfinch (*Carduelis lawrencei*)
- Marbled Godwit (*Limosa fedoa*)
- Nuttall's Woodpecker (*Picoides nuttallii*)
- Olive-sided Flycatcher (*Contopus cooperi*)
- Scripps's Murrelet (*Synthliboramphus scrippsi*)
- Short-billed Dowitcher (*Limnodromus griseus*)
- Tricolored Blackbird (*Agelaius tricolor*)
- Willet (*Tringa semipalmata*)

The project site provides suitable nesting habitat for numerous resident and migratory bird species. Although no bird nests were observed during the surveys conducted in support of the project, suitable nest sites are abundant throughout the project site and adjacent open space and many common bird species are expected to nest there.

3.4 Vegetation and Habitat

Vegetation mapping units, descriptions, and names are based on alliance level nomenclature in *A Manual of California Vegetation* (Sawyer et al. 2009). Vegetation data is presented in Table 3 and shown on Figure 2 (Attachment 1). Vegetation observed on the project site are included in Attachment 4 – Observed Species List. Representative photos are also provided in Attachment 5.

Gooding's willow - red willow riparian woodland and forest (*Salix gooddingii - Salix laevigata* Forest & Woodland Alliance). Gooding's willow is the dominant willow within the project site. Approximately 10 large Gooding's willows are present in the upstream portion of the project site. These willows are more than thirty feet tall and share a mixed canopy with the non-native trees such as Chinese elm (*Ulmus parvifolia*), gum (*Eucalyptus* sp.) and shamel ash (*Fraxinus uhdei*). The understory is sparse and also dominated by non-native species. Gooding's willow - red willow riparian woodland and forest is recognized as a sensitive natural community by CDFW (CDFW, 2021a).

Mulefat thickets (*Baccharis salicifolia* Shrubland Alliance). Mulefat thickets are dominated by mulefat (*Baccharis salicifolia*). The mulefat within the project site is sparse and interspersed with several non-native vegetation types. The sparseness of the vegetation and poor quality of the habitat makes this habitat less suitable for special-status riparian bird species.

Himalayan blackberry - rattlebox - edible fig riparian scrub (*Rubus armeniacus - Sesbania punicea - Ficus carica* Shrubland Semi-Natural Alliance). Himalayan blackberry riparian scrub is present in the more mesic portions of the project site. Himalayan blackberry (*Rubus armeniacus*) is an invasive species, and it is growing with along with other non-native species such as curly dock (*Rumex crispus*) and prickly lettuce (*Lactuca seriola*).

Eucalyptus - tree of heaven - black locust groves (*Eucalyptus* spp. - *Ailanthus altissima - Robinia pseudoacacia* Woodland Semi-Natural Alliance). The majority of the vegetation within the project site is dominated by non-native trees that were likely planted or escaped from nearby plantings. These include Chinese elm, gum, shamel ash, fig tree (*Ficus* sp.), and date palm (*Phoenix* sp.).

Poison hemlock or fennel patches (*Conium maculatum - Foeniculum vulgare* Herbaceous Semi-Natural Alliance). Poison hemlock patches were mapped throughout much of the low-flow channel. It is dominated by poison hemlock (*Conium maculatum*), black mustard (*Brassica nigra*), and other non-native species. The poison hemlock is growing adjacent to the mulefat thickets and Himalayan blackberry riparian scrub.

Upland mustards or star-thistle fields [*Brassica nigra - Centaurea* (*solstitialis, melitensis*) Herbaceous Semi-Natural Alliance]. Upland mustard fields were mapped throughout the disturbed uplands in the project site. This vegetation is dominated by black mustard, white horehound (*Marrubium vulgare*), mustard (*Hirschfeldia incana*), and non-native grasses. This community is also highly disturbed by homeless activities and maintenance of adjacent landowners.

Developed. Two portions of the project site were mapped as developed. This includes a concrete drainage structure and a LAHC facility. These areas are primarily unvegetated but are adjacent to ruderal areas mapped as upland mustards or star-thistle fields.

Table 3. Vegetation and Land Cover by Acreage within the Project Site.

Vegetation and Land Cover Type	Project Site (acres)
Riparian Vegetation	
Goodding's willow - red willow riparian woodland and forest	0.07
Mulefat thickets	0.06
Himalayan blackberry - rattlebox - edible fig riparian scrub	0.14
Upland Vegetation	
Eucalyptus - tree of heaven - black locust groves	1.21
Poison hemlock or fennel patches	0.23
Upland mustards or star-thistle fields	0.57
Other Cover Types	
Developed	0.02
Total:	**2.30**

Aquatic Resources and Habitat. Most of the project site provides no aquatic resources or aquatic habitat. Seasonally, for a very short duration, a small ephemeral stream channel conveys storms flows from LAHC to Machado Lake. These storms are stochastic and are not present for a long enough period to support aquatic life. In addition, a small stagnant pool is periodically present at the upstream end of the project site at the exit of a concrete storm drain. This pool has no signs of aquatic life and may be influenced by the urban runoff entering the pool from the adjacent LAHC campus and the City of Los Angeles streets, golf course, and ball fields. These very limited aquatic resources provide little to no aquatic habitat and provide no fish or spawning habitat.

3.5 Wildlife Movement

The ability for wildlife to move freely among populations and habitat areas is important to long-term genetic variation and demography. Fragmentation and isolation of natural habitat may cause loss of native species diversity in fragmented habitats. In the short term, wildlife movement may also be important to individual animals' ability to occupy their home ranges, if their ranges extend across a potential movement barrier. These considerations are especially important for rare, threatened, or endangered species, and wide-ranging species such as large mammals, which exist in low population densities.

The project site is located on the margins of an isolated patch of open space surrounded by urban development. The project site and adjacent open space is not providing a wildlife movement linkage but is supporting local wildlife species. The development of the project will remove a small amount of habitat but is not expected to impact wildlife movement through the region. In addition, the ephemeral stream channel is providing no aquatic resource value and is not providing a movement corridor for anadromous fish or any other aquatic species.

4.0 Project Impacts

Development of the project site will permanently impact a small ephemeral drainage and several patches of native riparian vegetation. The loss of this ephemeral channel that is currently dominated by non-native species will be less than significant because of the poor wildlife habitat that it provides. Permits for the loss of this channel will be required from CDFW and the Regional Water Quality Control Board (RWQCB). Additional details on this channel and the jurisdiction is addressed in the separate jurisdictional delineation report prepared for the project by Aspen. The loss of 0.18 acres of native riparian vegetation

has the potential to be significant and riparian habitat restoration at a 1:1 ratio is recommended to reduce the level of significance.

Many special-status species are known from the region and from Machado Lake in close proximity to the project site. Nearly all of these species are unlikely to be present or be impacted by the project because of the poor quality of the habitat or the lack of suitable habitat. Yellow warbler, Cooper's hawk, and several species of bat have a potential to be present but proposed avoidance and minimization measure below will avoid or reduce the potential impacts to these species. Nesting birds have a potential to be present during the nesting season and impacts to nesting birds would be significant and would violate state and federal law. Avoidance and minimization measures below would reduce potential impacts to nesting birds.

Lastly, southern tarplant has a potential to be present on the project site and be impacted by project construction. Loss of a small number of southern tarplant would be less than significant given the abundance of suitable occupied habitat surrounding Machado Lake and throughout coastal areas of southern California. Project impacts to special-status plants would be less than significant. All other biological resources are unlikely to be present or be impacted by the project. With implementation of the avoidance and minimization measures below all impacts will be less than significant.

5.0 Avoid and Minimization Measures

To avoid and minimize potential impacts to riparian vegetation, special-status birds, and nesting birds, Aspen recommends the following measures:

BIO-1 Riparian Vegetation: LACCD shall replant all native riparian vegetation that is removed during project activities. Replacement and creation of native riparian habitat will also account for the loss of CDFW streambeds. It is expected that up to 0.14 acres of native riparian vegetation and 0.4 acres of CDFW streambeds may be impacted and it shall be replaced at a 1:1 ratio. If riparian vegetation is avoided, these areas will not need to be replaced and would require less than 0.18 acres of restoration. The riparian vegetation replanting shall include Gooding's willow, mulefat, and other native species known from the project site or adjacent Machado Lake. The riparian vegetation replanting can occur adjacent to the new channel, on the northside of the new channel, or elsewhere on the LAHC property with suitable conditions. Irrigation will likely be required to establish the vegetation.

The restoration area shall be maintained and monitored for a period of five years.

BIO-2 Nesting Birds: LACCD shall complete project construction outside of the bird nesting season (August 16 – February 14) to avoid potential impacts to nesting birds and special-status birds. If work must occur during the nesting season (February 15 – August 15), LACCD will retain a qualified biologist to conduct nesting bird surveys to ensure that no nesting birds are present on the project site. If nests are found, the biologist shall establish appropriate nest buffers and work will not be allowed to occur within these buffers. The biologist will monitor the bird activities to ensure that nests are not impacted.

BIO-3 Special-status Wildlife: LACCD shall retain a qualified biologist to conduct a pre-construction biological survey of the project site. The biologist shall survey the site for all special-status bats, birds, and other special-status wildlife species. If any special-status species are found, the qualified biologist shall work with LACCD to relocate these species or allow them to leave the project site on their own. The biologist shall also be present during initial vegetation clearing.

6.0 Summary

No listed species were observed within the project site and there is no potential for listed species to be present. Several special-status wildlife species have a potential to be present on the project site but with the proposed avoidance and minimization measures, significant impacts will be avoided. Nesting birds will also be avoided with the implementation of the avoidance and minimization measures. One special-status plants has a potential to be present but the loss of a small number of these plants would be less than significant and avoid and minimization are not required.

The project will impact native riparian vegetation. The loss of this vegetation could be significant, but the proposed avoidance and minimization measure required LACCD to replace the lost vegetation at a ratio of 1:1 to be planted on site at the completion of the project. The project will impact non-native vegetation; however, loss of non-native vegetation is not significant. The project is not expected to impact any wildlife corridors.

A small ephemeral drainage is present on the project site and LACCD will need to obtain regulatory permits from CDFW and the RWQCB for impacts to this drainage. This drainage provides no aquatic resource value. The loss of this drainage is not significant, and no further avoidance or mitigation measures are required.

With the implementation of the avoidance and minimization measures in this report and any measures in the regulatory permits, the project is not expected to significantly impact biological resources.

7.0 References

American Ornithologists' Union. 1998. Check-list of the North American Birds, 7th ed. Committee on Classification and Nomenclature, American Ornithologists' Union, Washington DC.

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, D.H. Wilken, eds. 2012. The Jepson Manual: Vascular Plants of California, 2nd ed. University Press, Berkeley, California.

Barbour, R.W. and W.H. Davis. 1969. Bats of America. University Press of Kentucky, Lexington, Kentucky.

CCH (Consortium of California Herbaria). 2021. Botanical specimen data provided by the participants of the Consortium of California Herbaria. Online: http://ucjeps.berkeley.edu/consortium/

CDFW (California Department of Fish & Wildlife). 2021a. California Natural Diversity Database (CNDDB), Rarefind, Version 3.1.1. Heritage section, CDFW, Sacramento.

_____. 2021b. Special Vascular Plants, Bryophytes, and Lichens List. CDFW, Sacramento. Online: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline

_____. 2021c. Special animals list. CDFG, Sacramento. Online: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline

_____. 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. CDFW, Sacramento.

CNPS (California Native Plant Society). 2021. Inventory of rare and endangered plants. California Native Plant Society. Sacramento. Online: http://www.cnps.org/inventory. Accessed August 2021.

Ebird.org. 2021. eBird. [Online]: https://ebird.org/explore. Accessed August 2021.

Feldhamer, G.A., B.C. Thompson, and J.A. Chapman, eds. 2003. Wild Mammals of North America: Biology, Management and Conservation, 2nd ed. Johns Hopkins University Press, Baltimore MD.

Gannon, W.L. 2003. Bats (Vespertilionidae, Molossidae, Phyllostomidae). Pages 56-74 in Feldhamer, G.A., B.C. Thompson, and J.A. Chapman, eds. Wild Mammals of North America: Biology, Management and Conservation, 2nd ed. Johns Hopkins University Press, Baltimore MD. 1216 pp.

Garrett, K. and J. Dunn. 1981. Birds of Southern California: Status and Distribution. Los Angeles Audubon Society, Los Angeles, California.

Grinnell, J. and A.H. Miller. 1944. The Distribution of the Birds of California. Cooper Ornithological Club, Berkeley (reprint 1986 by Artemisia Press, Lee Vining, CA).

Hall, E.R. 1981. The Mammals of North America. John Wiley and Sons, New York.

Hatfield, R., Jepsen, S., Thorp, R., Richardson, L. & Colla, S. 2015. *Bombus crotchii*. The IUCN Red List of Threatened Species 2015: e. T44937582A46440211. Online: http://dx.doi.org/10.2305/IUCN.UK.2015-2.RLTS.T44937582A46440211.en. Accessed August 2021.

iNaturalist.org. 2021. iNaturalist. [Online]: https://www.inaturalist.org/observations Accessed August 2021.

Jennings, M.R. and M.P. Hayes. 1994. Amphibian and reptile species of special concern in California. California Dept. of Fish and Game, Sacramento.

Los Angeles County Public Works. 2021. County-wide Precipitation Map. [Online]: https://dpw.lacounty.gov/wrd/rainfall/# Accessed August 2021.

Pierson, E.D. and W.E. Rainey. 1998. California leaf-nosed bat, *Macrotus californicus* Pallid bat, *Antrozous pallidus*, Townsend's big-eared bat, *Corynorhinus townsendii*. Western mastiff bat, *Eumops perotis*, pocketed free-tailed bat *Nyctinomops femorosaccus*, and big free-tailed bat *Nyctinomops macrotis*. Pages 27-41 and 66-76 in Bolster, B.C. (ed.) Terrestrial Mammal Species of Special Concern in California. Draft Final Report prepared by P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. Report submitted to California Department of Fish and Game Wildlife Management Division, Nongame Bird and Mammal Conservation Program for Contract No. FG3146WM. Online: http://www.dfg.ca.gov/wildlife/nongame/ssc/1998mssc.html

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evans. 2009. Manual of California Vegetation, 2nd ed. California Native Plant Society, Sacramento, California. 1300 pp.

Sibley, D.A. 2000. Sibley Guide to Birds. A. A. Knopf, New York, NY.

Stebbins, R.C. 2003. Western Reptiles and Amphibians, 3rd ed. Houghton Mifflin Company, Boston Mass.

USFWS (US Fish and Wildlife Service). 2022. IPaC Information for Planning and Consultation. [Online]: https://ipac.ecosphere.fws.gov/ Accessed March 2022.

_____. 2007. Protection of eagles; definition of ‘‘disturb.’’ Federal Register 72:31132 -31140 (5 Jun).

Wilson, D.E. and S. Ruff, eds. 1999. Smithsonian Book of North American Mammals. Smithsonian Institution Press, Washington DC.

Attachment 1 – Figures

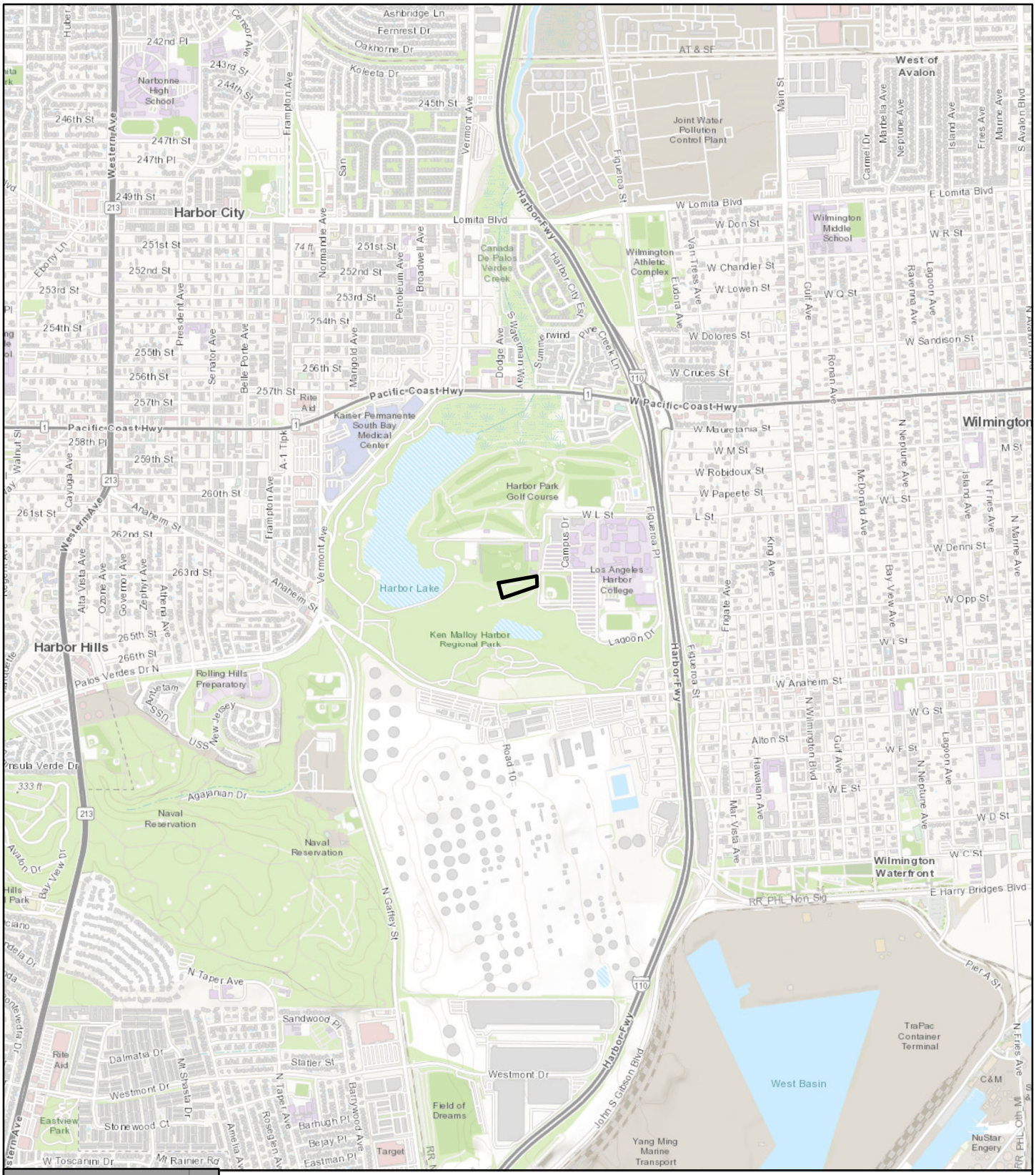
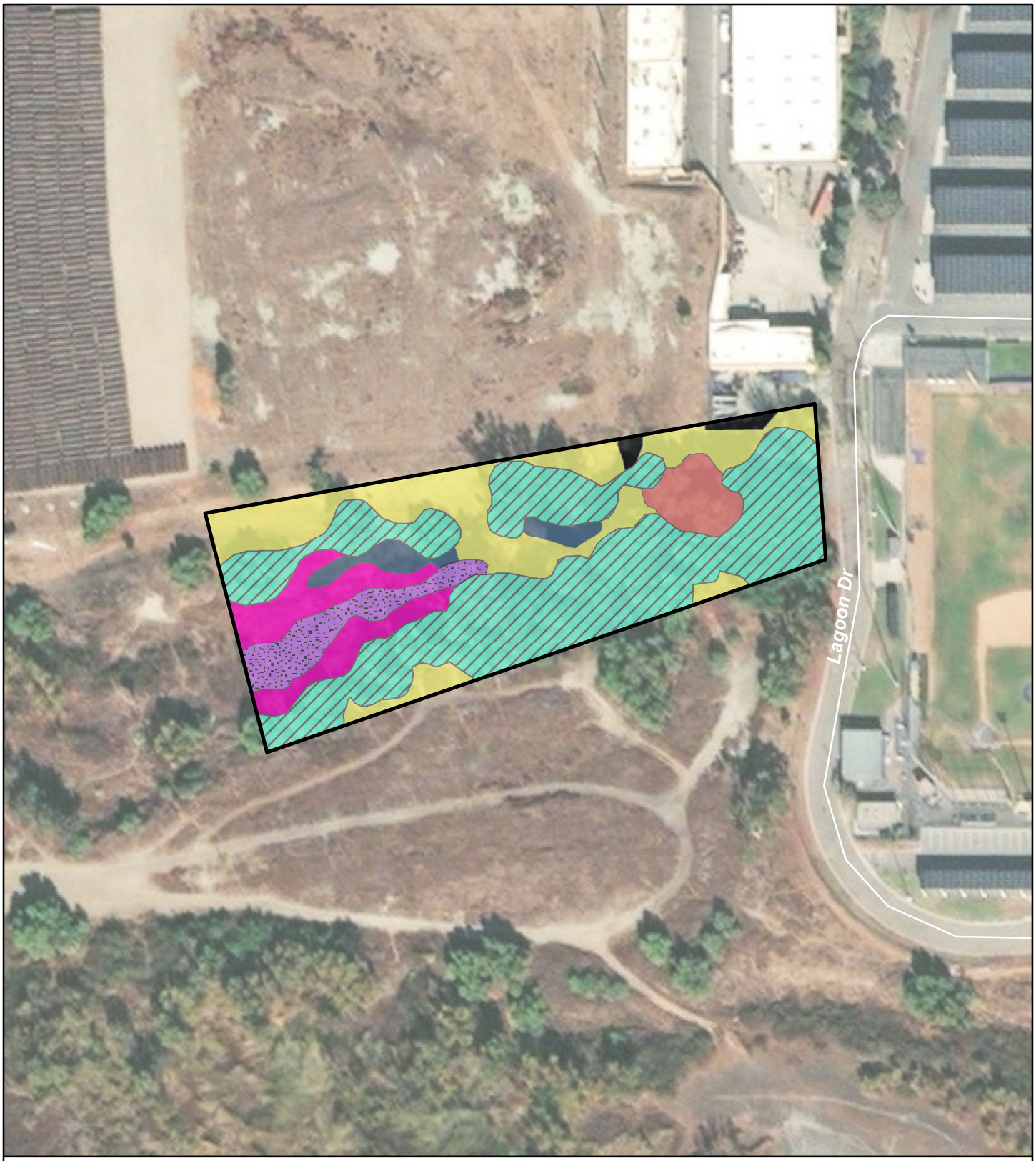


FIGURE 1
Project Overview



Project Site

Vegetation and Land Cover Types

- Developed (0.03 ac)
- Eucalyptus - tree of heaven - black locust groves (1.20 ac)
- Goodding's willow - red willow riparian woodland and forest (0.10 ac)
- Himalayan blackberry - rattlebox - edible fig riparian scrub (0.14 ac)
- Mulefat thickets (0.08 ac)
- Poison hemlock or fennel patches (0.22
- Upland mustards or star-thistle fields (0.53

FIGURE 2
Vegetation and Land Cover

N

50 0 50
Feet

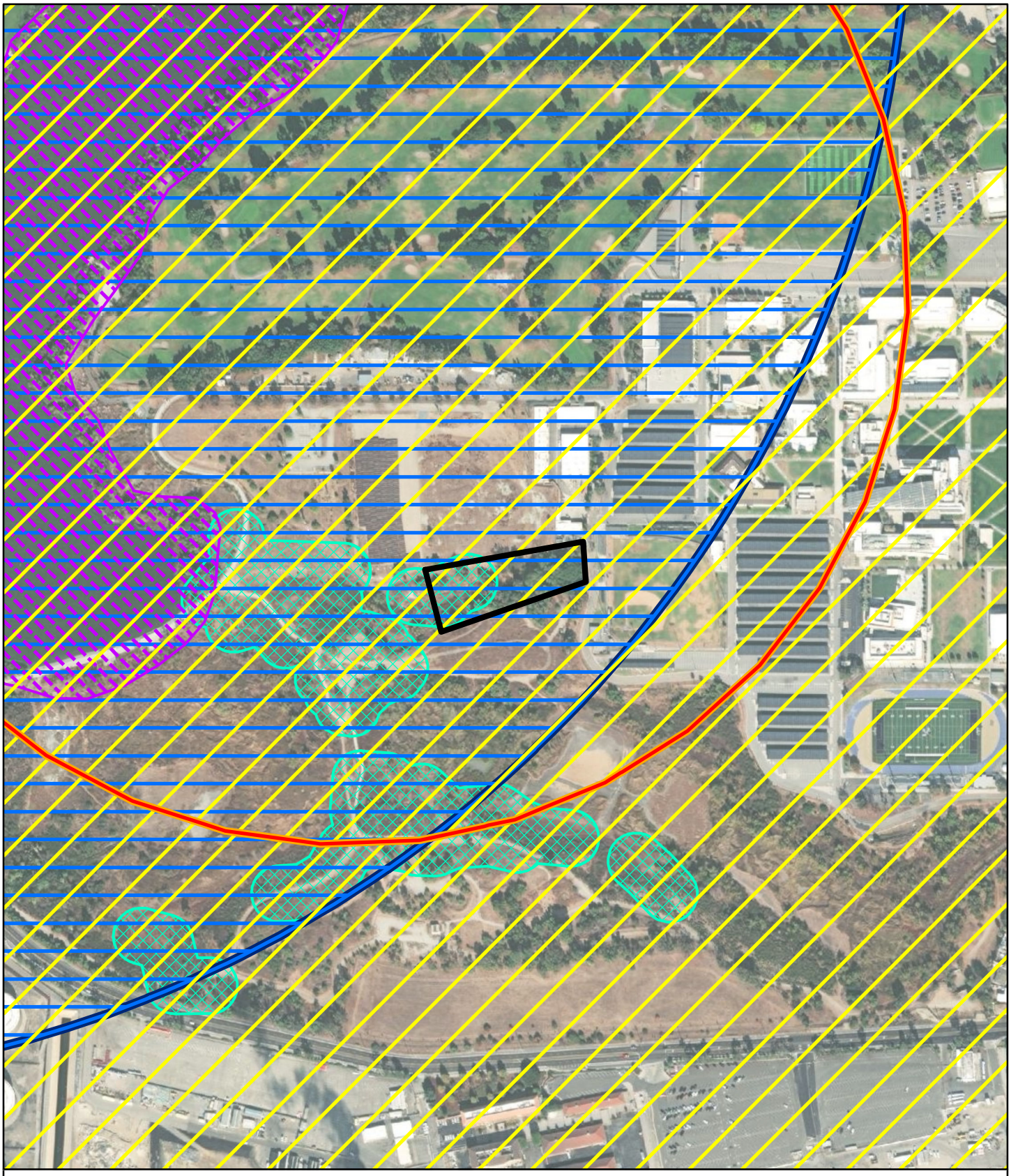


FIGURE 3
Biological Resources

Attachment 2 – California Natural Diversity Database Results

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Long Beach (3311872) OR South Gate (3311882) OR Venice (3311884) OR Inglewood (3311883) OR Redondo Beach (3311874) OR Torrance (3311873) OR San Pedro (3311863))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Anniella stebbinsi Southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
Aphanisma blitoides aphanisma	PDCHE02010	None	None	G3G4	S2	1B.2
Astragalus hornii var. hornii Horn's milk-vetch	PDFAB0F421	None	None	GUT1	S1	1B.1
Astragalus pycnostachyus var. lanosissimus Ventura Marsh milk-vetch	PDFAB0F7B1	Endangered	Endangered	G2T1	S1	1B.1
Astragalus tener var. titi coastal dunes milk-vetch	PDFAB0F8R2	Endangered	Endangered	G2T1	S1	1B.1
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex coulteri Coulter's saltbush	PDCHE040E0	None	None	G3	S1S2	1B.2
Atriplex pacifica south coast saltscale	PDCHE041C0	None	None	G4	S2	1B.2
Atriplex parishii Parish's brittlescale	PDCHE041D0	None	None	G1G2	S1	1B.1
Atriplex serenana var. davidsonii Davidson's saltscale	PDCHE041T1	None	None	G5T1	S1	1B.2
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Brennania belkini Belkin's dune tabanid fly	IIDIP17010	None	None	G1G2	S1S2	
Centromadia parryi ssp. australis southern tarplant	PDAST4R0P4	None	None	G3T2	S2	1B.1
Centromadia pungens ssp. laevis smooth tarplant	PDAST4R0R4	None	None	G3G4T2	S2	1B.1
Chaenactis glabriuscula var. orcuttiana Orcutt's pincushion	PDAST20095	None	None	G5T1T2	S1	1B.1
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
Chenopodium littoreum coastal goosefoot	PDCHE091Z0	None	None	G1	S1	1B.2
Chloropyron maritimum ssp. maritimum salt marsh bird's-beak	PDSCR0J0C2	Endangered	Endangered	G4?T1	S1	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Chorizanthe parryi var. fernandina San Fernando Valley spineflower	PDPGN040J1	None	Endangered	G2T1	S1	1B.1
Cicindela hirticollis gravida sandy beach tiger beetle	IICOL02101	None	None	G5T2	S2	
Cicindela latesignata latesignata western beach tiger beetle	IICOL02113	None	None	G2G4T1T2	S1	
Cicindela senilis frosti senile tiger beetle	IICOL02121	None	None	G2G3T1T3	S1	
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Coelus globosus globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Crossosoma californicum Catalina crossosoma	PDCRO02020	None	None	G3	S3	1B.2
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	Candidate	None	G4T2T3	S2S3	
Dithyrea maritima beach spectaclepod	PDBRA10020	None	Threatened	G1	S1	1B.1
Dudleya virens ssp. insularis island green dudleya	PDCRA040S2	None	None	G3?T3	S3	1B.2
Empidonax traillii extimus southwestern willow flycatcher	ABPAE33043	Endangered	Endangered	G5T2	S1	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eryngium aristulatum var. parishii San Diego button-celery	PDAPI0Z042	Endangered	Endangered	G5T1	S1	1B.1
Eucosma hennei Henne's eucosman moth	IILEM0R390	None	None	G1	S1	
Eugnosta busckana Busck's gallmoth	IILEM2X090	None	None	G1G3	SH	
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
Euphilotes battoides allyni El Segundo blue butterfly	IILEPG201B	Endangered	None	G5T1	S1	
Glaucopsyche lygdamus palosverdesensis Palos Verdes blue butterfly	IILEPG402A	Endangered	None	G5T1	S1	
Glyptostoma gabrielense San Gabriel chestnut	IMGASB1010	None	None	G2	S2	
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Habroscelimorpha gabbii western tidal-flat tiger beetle	IICOL02080	None	None	G2G4	S1	
Horkelia cuneata var. puberula mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
Isocoma menziesii var. decumbens decumbent goldenbush	PDAST57091	None	None	G3G5T2T3	S2	1B.2
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
Lasthenia glabrata ssp. coulteri Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Lycium brevipes var. hassei Santa Catalina Island desert-thorn	PDSOL0G0N0	None	None	G5T1Q	S1	3.1
Microtus californicus stephensi south coast marsh vole	AMAFF11035	None	None	G5T2T3	S1S2	SSC
Nama stenocarpa mud nama	PDHYD0A0H0	None	None	G4G5	S1S2	2B.2
Navarretia fossalis spreading navarretia	PDPLM0C080	Threatened	None	G2	S2	1B.1
Navarretia prostrata prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.2
Nemacaulis denudata var. denudata coast woolly-heads	PDPGN0G011	None	None	G3G4T2	S2	1B.2
Neotoma lepida intermedia San Diego desert woodrat	AMAFF08041	None	None	G5T3T4	S3S4	SSC
Nyctinomops femorosaccus pocketed free-tailed bat	AMACD04010	None	None	G5	S3	SSC
Nyctinomops macrotis big free-tailed bat	AMACD04020	None	None	G5	S3	SSC
Onychobaris langei Lange's El Segundo Dune weevil	IICOL4W010	None	None	G1	S1	
Orcuttia californica California Orcutt grass	PMPOA4G010	Endangered	Endangered	G1	S1	1B.1
Panoquina errans wandering (=saltmarsh) skipper	IILEP84030	None	None	G4G5	S2	
Passerculus sandwichensis beldingi Belding's savannah sparrow	ABPBX99015	None	Endangered	G5T3	S3	
Pelecanus occidentalis californicus California brown pelican	ABNFC01021	Delisted	Delisted	G4T3T4	S3	FP
Pentachaeta lyonii Lyon's pentachaeta	PDAST6X060	Endangered	Endangered	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Perognathus longimembris pacificus Pacific pocket mouse	AMAFD01042	Endangered	None	G5T1	S1	SSC
Phacelia stellaris Brand's star phacelia	PDHYD0C510	None	None	G1	S1	1B.1
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Polioptila californica californica coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T3Q	S2	SSC
Potentilla multijuga Ballona cinquefoil	PDROS1B120	None	None	GX	SX	1A
Rhaphiomidas terminatus terminatus El Segundo flower-loving fly	IIDIP05022	None	None	G1T1	S1	
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sidalcea neomexicana salt spring checkerbloom	PDMAL110J0	None	None	G4	S2	2B.2
Siphateles bicolor mohavensis Mohave tui chub	AFCJB1303H	Endangered	Endangered	G4T1	S1	FP
Sorex ornatus salicornicus southern California saltmarsh shrew	AMABA01104	None	None	G5T1?	S1	SSC
Southern Coastal Bluff Scrub Southern Coastal Bluff Scrub	CTT31200CA	None	None	G1	S1.1	
Southern Coastal Salt Marsh Southern Coastal Salt Marsh	CTT52120CA	None	None	G2	S2.1	
Southern Dune Scrub Southern Dune Scrub	CTT21330CA	None	None	G1	S1.1	
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
Sternula antillarum browni California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
Streptocephalus woottoni Riverside fairy shrimp	ICBRA07010	Endangered	None	G1G2	S1S2	
Suaeda esteroa estuary seablite	PDCHE0P0D0	None	None	G3	S2	1B.2
Symphyotrichum defoliatum San Bernardino aster	PDASTE80C0	None	None	G2	S2	1B.2
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Trigonoscuta dorothea dorothea Dorothy's El Segundo Dune weevil	IICOL51021	None	None	G1T1	S1	
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Vireo bellii pusillus	ABPBW01114	Endangered	Endangered	G5T2	S2	
least Bell's vireo						

Record Count: 83

Attachment 3 – IPaC Resource List

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Los Angeles County, California

Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

http://www.fws.gov/carlsbad/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g. placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Pacific Pocket Mouse Perognathus longimembris pacificus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8080	Endangered

Birds

NAME	STATUS
California Least Tern Sterna antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
Coastal California Gnatcatcher Polioptila californica californica Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo Vireo bellii pusillus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5945	Endangered
Western Snowy Plover Charadrius nivosus nivosus There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8035	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS

Riverside Fairy Shrimp Streptocephalus woottoni Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/8148

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird

species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Black Oystercatcher Haematopus bachmani This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31
Black Skimmer Rynchops niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Black Swift Cypseloides niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10

Black Tern Chlidonias niger — Breeds May 15 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3093

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Scripps's Murrelet Synthliboramphus scrippsi — Breeds Feb 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

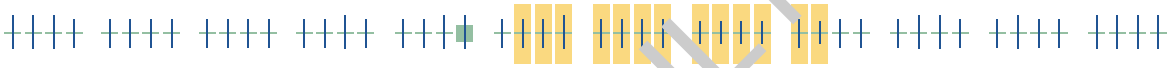
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

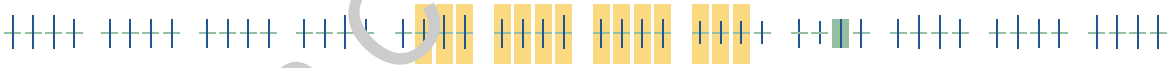
Black Oystercatcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Black Skimmer BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Black Swift BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

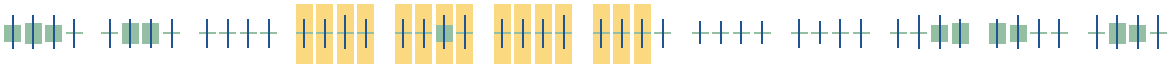


Black Tern BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

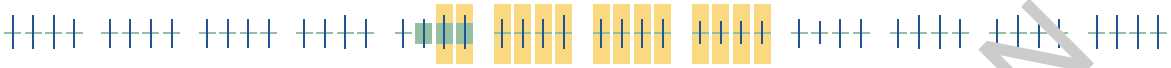


Black Turnstone BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

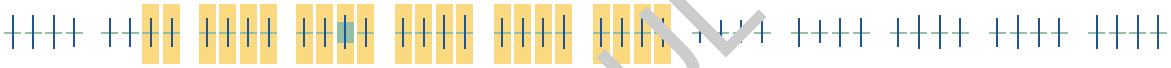
Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Olive-sided Flycatcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

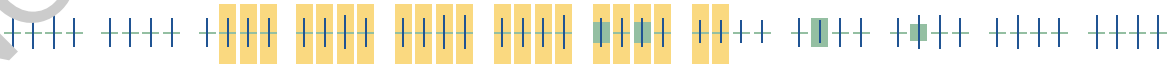


Scripps's Murrelet BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Short-billed Dowitcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tricolored Blackbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds

guide. If a guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid

or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME
This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment 4 – Observed Species List

Latin Name	**Common Name**
VASCULAR PLANTS	
Dicotyledons	
PINACEAE	PINE FAMILY
* *Pinus* sp.	Unid. ornamental
ADOXACEAE	MUSKROOT FAMILY
Sambucus nigra ssp. *cerulea*	Blue elderberry
ANACARDIACEAE	SUMAC or CASHEW FAMILY
* *Schinus molle*	Peruvian pepper tree
APIACEAE	CELERY FAMILY
* *Conium maculatum*	Poison hemlock
* *Foeniculum vulgare*	Fennel
ASTERACEAE	ASTER FAMILY
Baccharis salicifolia	Mule fat
* *Carduus pycnocephalus*	Italian thistle
* *Glebionis coronaria*	Garland daisy
* *Helminthotheca echioides*	Bristly ox-tongue
* *Lactuca serriola*	Prickly lettuce
BASALLACEAE	MADEIRA-VINE FAMILY
* *Anredera cordifolia*	Mignonette vine
BRASSICACEAE	MUSTARD FAMILY
* *Brassica nigra*	Black mustard
* *Hirschfeldia incana*	Shortpod mustard
* *Raphanus sativus*	Wild radish
GERANIACEAE	GERANIUM FAMILY
* *Geranium dissectum*	Cut-leaved geranium
LAMIACEAE	MINT FAMILY
* *Marrubium vulgare*	Horehound
MORACEAE	MULBERRY FAMILY, FIG FAMILY
* *Ficus* sp.	Unid. ornamental
MYRTACEAE	MYRTLE FAMILY, EUCALYPTUS FAMILY
* *Eucalyptus* sp.	Ornamental eucalyptus
OLEACEAE	OLIVE FAMILY
* *Fraxinus udhei*	Shamel ash (escaped ornamental)
PASSIFLORACEAE	PASSION FLOWER FAMILY
* *Passiflora caerulea*	Bluecrown passionflower
PITTOSPORACEAE	PITTOSPORUM FAMILY
* *Pittosporum tobira*	Mock orange
POLYGONACEAE	BUCKWHEAT FAMILY
* *Rumex crispus*	Curly dock
ROSACEAE	ROSE FAMILY
* *Prunus persica*	Peach (escape from cultiv.)
* *Pyracantha sp.*	Ornamental pyracantha
* *Rubus armeniacus*	Himalayan blackberry
SALICACEAE	WILLOW FAMILY
Salix gooddingii	Goodding's black willow
TAMARICACEAE	TAMARISK FAMILY
* *Tamarix aphylla*	Athel

ULMACEAE	ELM FAMILY
* *Ulmus parviflora*	Chinese elm
VITACEAE	GRAPE FAMILY
Vitis girdiana	Wild grape

Monocotyledons	
AGAVACEAE	CENTURY PLANT FAMILY, AGAVE FAMILY
Yucca baccata	Banana yucca, fleshy-fruited yucca
ARECACEAE	PALM FAMILY
* *Phoenix canariensis*	Canary Island palm
CYPERACEAE	SEDGE FAMILY
Cyperus eragrostis	Tall umbrella sedge
POACEAE	GRASS FAMILY
* *Bromus diandrus*	Ripgut brome
* *Ehrharta erecta*	Panic veldt grass
* *Hordeum murinum*	Wall barley, hare barley
* *Paspalum dilitatum*	Dallis grass
* *Stenotaphrum secundatum*	St. Augustine grass
* *Stipa miliacea*	Smilo grass

VERTEBRATE ANIMALS	
REPTILIA	REPTILES
IGUANIDAE	IGUANID LIZARDS
Sceloporus occidentalis	Western fence lizard
AVES	BIRDS
COLUMBIDAE	PIGEONS AND DOVES
Zenaida macroura	Mourning dove
TROCHILIDAE	HUMMINGBIRDS
Calypte anna	Anna's hummingbird

Attachment 5 – Photo Exhibit

Photo 1: Small isolated stagnant pool near an existing storm drain outlet head wall.

Photo 2: Downstream view of dense non-native vegetation.

Photo 3: Typical view of open non-native vegetation within the project site.

Photo 4: View of a small patch of mulefat thickets within the project site.

Photo 5: Sparse understory of the non-native woodland within the project site.

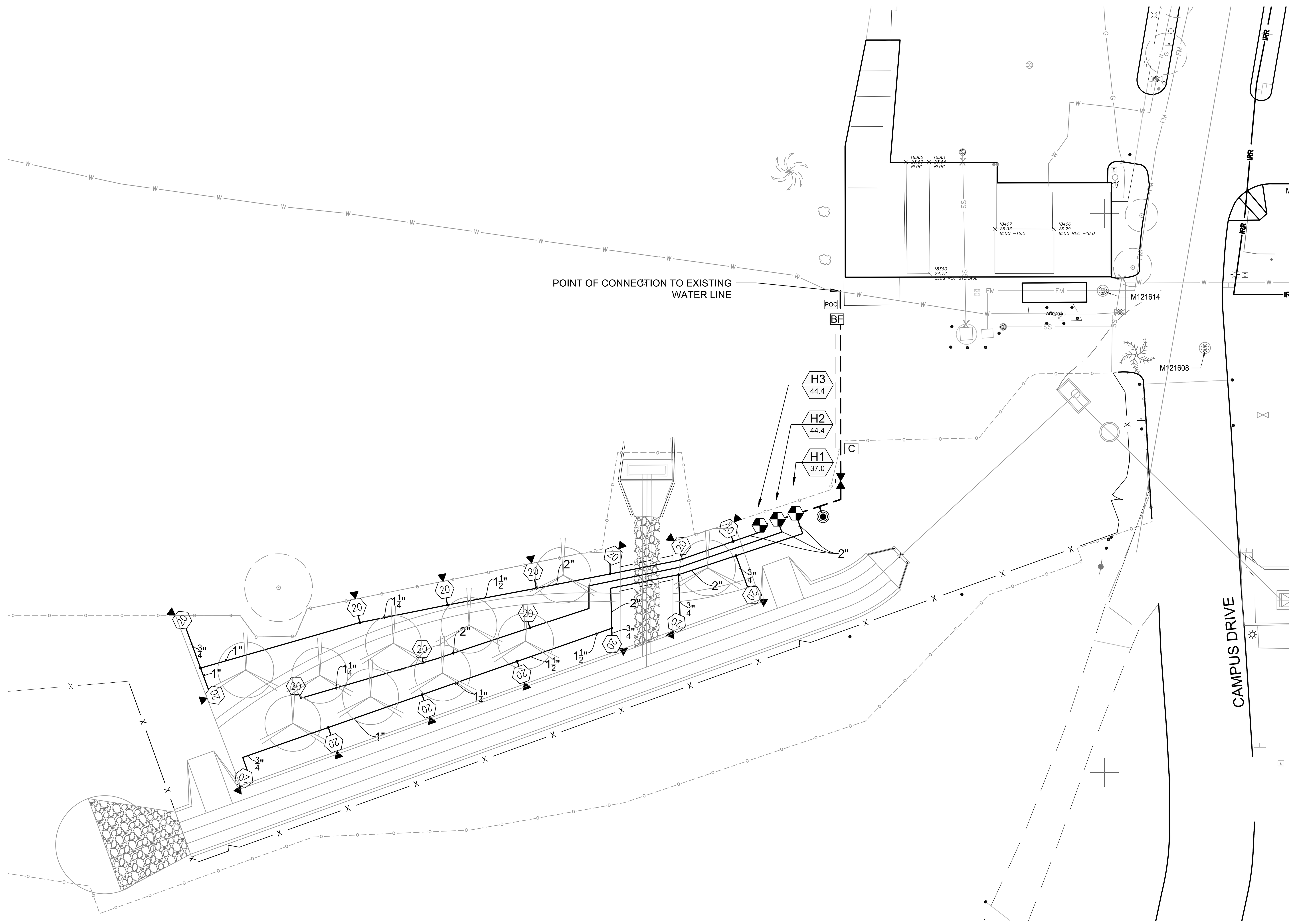
Photo 6: Non-native vegetation at the most upstream portion of the project site.

Photo 7: Typical view on non-native blackberries on the project site.

Photo 8: Downstream view of on non-native blackberries within the project site.

Appendix B

Riparian Planting Plan



PRESSURE LOSS CALCULATIONS "HIGHEST DEMAND" VALVE H3 (44.4 GPM) POTABLE WATER PRESSURE 92 H / 80 LOW					
ITEM	**QUANTITY**		**PSI LOSS/100' OF PIPE**	**PSI LOSS**	**TOTAL PSI LOSS**
LANDSCAPE WATER METER 2"	1			1.5	1.5
BACKFLOW PREVENTER 2"	1			12	12.0
GATE VALVE 2"	1			1.96	2.0
REMOTE CONTROL VALVE 2"	1			.80	0.8
2" SCHEDULE 40 - 44.4 GPM	300	LF	1.42		4.3
2" SCHEDULE 40 LATERAL - 37.0 GPM	26	LF	1.15		0.3
2" SCHEDULE 40 LATERAL - 33.3 GPM	27	LF	.89		0.2
1 1/2" SCH. 40 LATERAL - 25.9 GPM	32	LF	1.79		0.6
1 1/4" SCH. 40 LATERAL - 18.5 GPM	32	LF	2.27		0.7
1" SCH. 40 LATERAL - 11.1 GPM	59	LF	3.35		2.0
3/4" SCH. 40 LATERAL - 3.7 GPM	15	LF	1.42		0.2
TOTAL PIPE / EQUIPMENT LOSS					8.3
ADDITIONAL 10% OF PIPE LOSS FOR ALL PIPE LINE FITTINGS					0.8
TOTAL PRESSURE LOSS					25.4
RESIDUAL PRESSURE CALCULATION					
LOWEST STATIC PRESSURE (LESS 10% 79.2) - TOTAL PRESSURE LOSS					53.8
SYSTEM OPERATING PRESSURE				30	30.0
TOTAL RESIDUAL PRESSURE FOR VALVE H3					23.8

RIPARIAN IRRIGATION LEGEND

SYMBOL	ITEM	MANUFACTURER	SIZE	DESCRIPTION	DETAIL
POC	POINT OF CONNECTION TO WATER LINE				
BF	REDUCED PRESSURE BACKFLOW PREVENTER	WATTS	2"	FEBCO 825YA LEAD FREE REDUCED PRESSURE BACKFLOW PREVENTER ON CONCRETE PAD, IN STEEL ENCLOSURE	SEE DETAIL 1/L230
C	SOLAR POWERED CONTROLLER	DIG		LEIT 4004 - FOUR STATION PLUS MV/P, AMBIENT LIGHT POWERED IRRIGATION CONTROLLER.	SEE DETAIL 2/L230
	GATE VALVE	NIBCO	LINE SIZE	T-113 BRASS GATE VALVE	SEE DETAIL 3/L200.
— —	MAINLINE		2"	SCHEDULE 40 PVC WITH SCHEDULE 80 FITTINGS TO 2", 2 1/2"+ CLASS 315	SEE DETAIL 1/L200.
— — — —	SCHEDULE 26 PIPE / WIRE SLEEVE			INSTALL PIPE USING PVC BEDDING DETAIL 29 ON C901 FOR COVERS EXCEEDING 4 FEET. OTHERWISE, INSTALL PVC PIPE PER ENCASEMENT CASE II OF COUNTY OF LA STANDARD PLAN 2023-2 ON SHEET L230 CONCRETE STRENGTH MIN. 2,500 PSI AND MAX CHLORIDE CONTENT 0.3%	SEE DETAILS 29/C901 AND 2021-2/L230
——	**UV RESITANT** LATERAL LINE - ON SURFACE		PER PLAN	SCHEDULE 40 PVC. ROUTE 12" DEEP IN PLANTERS WHERE POSSIBLE. **UV RESISTANT AND ON SURFACE** EXCEPT WHEN INSIDE SLEEVE.	SEE DETAIL 1/L200.
	QUICK COUPLER	HUNTER	2"	ACME QCV-100	SEE DETAIL 2/L200
	REMOTE CONTROL VALVE	BUCKNER SUPERIOR 950 PRS BRASS VALVE	2"		
	PIPE SIZE				
20 / 20	ROTOR HEAD	HUNTER 1-20 ROTOR ON GRADE WITH RIGID RISER AND CHECK VALVE		17-46' RADIUS	SEE DETAIL 2/L130

RIPARIAN IRRIGATION VALVE LEGEND

VALVE #	FLOW RATE GPM	VALVE SIZE	DESCRIPTION
VALVE H1	37.0	2"	HABITAT AREA LOWER ROW
VALVE H2	44.4	2"	HABITAT AREA MIDDLE ROW - FULL HEADS
VALVE H3	44.4	2"	HABITAT AREA UPPER ROW

RIPARIAN IRRIGATION NOTE:

IRRIGATION TO HABITAT AREA IS TEMPORARY; TO BE REMOVED UPON PLANT ESTABLISHMENT

RIPARIAN SHEET INDEX:

0 10' 20' 40'
SCALE: 1" = 20'

DIGALERT
DIAL TOLL FREE
1-800-277-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

AGENCY APPROVAL

CLIENT

Los Angeles Community College District

LOS ANGELES HARBOR COLLEGE
1111 FIGUEROA PLACE
WILMINGTON, CA 90744

LACCD PROJECT NAME

LOS ANGELES HARBOR COLLEGE
STORM WATER IMPLEMENTATION

LACCD PROJECT NUMBER

03H-40J-309.06
03H-40J-309.07
03H-40J-309.08
03H-40J-309.09

BUILDER

DESIGN CONSULTANT

LAND IMAGES
LANDSCAPE ARCHITECTURE
6605 Hollywood Boulevard, Suite 210 | Los Angeles, CA 90028
323-466-4707 | landimages.net

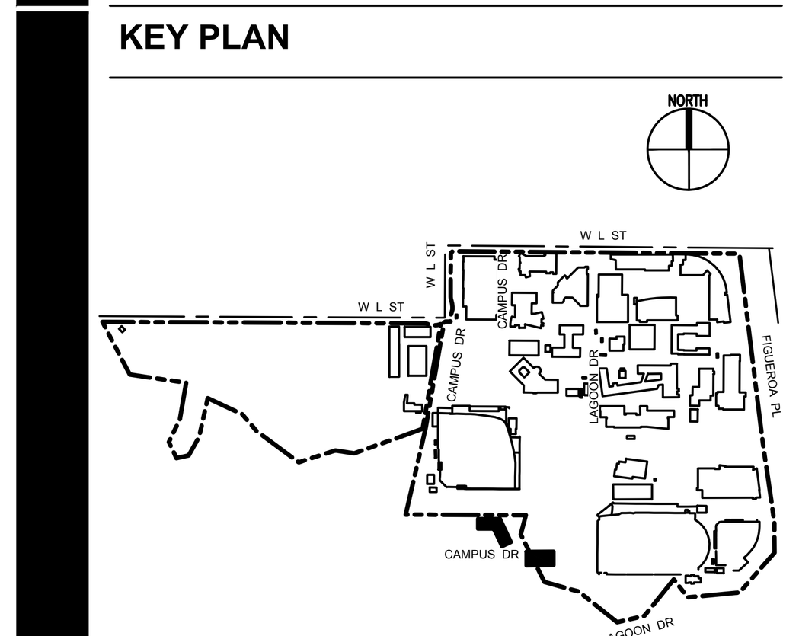
REGISTRATION STAMP

ISSUE

MARK	DATE	DESCRIPTION
	02.18.22	RIPARIAN REPLANTING
	07.09.21	DSA BACK CHECK
	05.25.21	100% CONST. DOCUMENTS
	01.27.21	100% CONST. DOCUMENTS
	12.15.20	95% CONST. DOCUMENTS
	10.16.20	90% CONST. DOCUMENTS
	07.14.20	60% DESIGN
	05.12.20	50% SCHEMATIC DESIGN

DESIGNER PROJ. NO. R306254.01
DRAWN BY:
CHECKED BY:
SCALE:

KEY PLAN

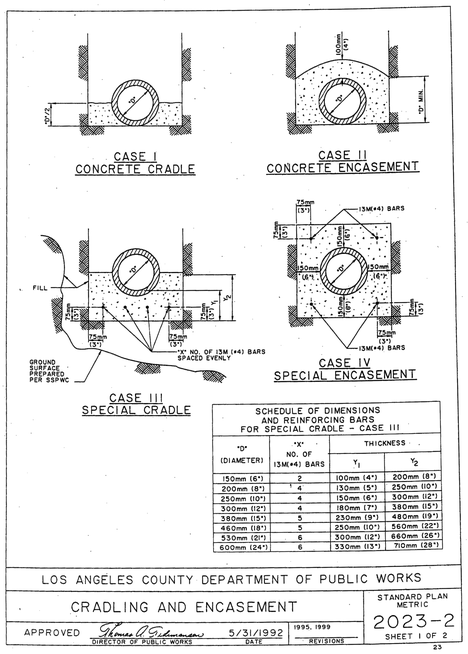


SHEET TITLE

RIPARIAN IRRIGATION PLAN

SHEET NUMBER

L130



SCHEDULE OF DIMENSIONS AND REINFORCING BARS FOR SPECIAL CRADLE - CASE III

"D" (DIAMETER)	"X" NO. OF 13M(#4) BARS	THICKNESS Y_1	THICKNESS Y_2
150mm (6")	2	100mm (4")	200mm (8")
200mm (8")	4	130mm (5")	250mm (10")
250mm (10")	4	150mm (6")	300mm (12")
300mm (12")	4	180mm (7")	380mm (15")
380mm (15")	5	230mm (9")	480mm (19")
460mm (18")	5	250mm (10")	560mm (22")
530mm (21")	6	300mm (12")	660mm (26")
600mm (24")	6	330mm (13")	710mm (28")

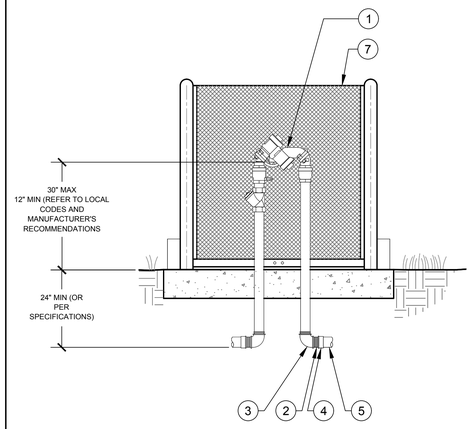
LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

CRADLING AND ENCASEMENT

STANDARD PLAN METRIC 2023-2 SHEET 1 OF 2

APPROVED Thomas O. Gilmore 5/31/1992 DIRECTOR OF PUBLIC WORKS — DATE — 1995, 1999 REVISIONS

23



LEGEND:

1. FEBCO MODEL 825 YA REDUCED PRESSURE BACKFLOW PREVENTER, INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. BRASS NIPPLE.
3. BRASS ELL (TXT).
4. PVC MALE ADAPTOR (TXS).
5. PRESSURE SUPPLY LINE PER IRRIGATION LEGEND.
6. FINISH GRADE, SOIL COMPACTED TO MIN. 90%.
7. "GUARDSHAK" 304 STAINLESS STEEL LOCKING ENCLOSURE. INSTALL PER MANUFACTURER'S FIRECTIONS

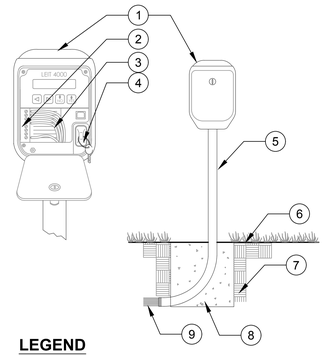
NOTES:

A. USE TEFLON PIPE DOPE SEALANT ON ALLTHREADED FITTINGS.

B. WRAP PIPE AND FITTINGS WITH PVC TAPE, PER SPECIFICATIONS.

REDUCED PRESSURE BACKFLOW PREVENTER IN ENCLOSURE (1)

SCALE: 11/2" - 1'

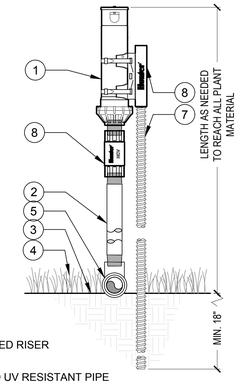


LEGEND

1. AMBIENT LIGHT POWERED IRRIGATION CONTROLLER
2. TERMINAL STRIP
3. 12 OR 14 GAUGE WIRE.
4. PROGRAMMING KEY
5. 34" STEEL MOUNTING COLUMN
6. FINISH GRADE
7. 6½ " OF BACKFILL SOIL
8. 12"X18" POURED CONCRETE BASE USING 90LB BAG OF CONCRETE. INSTALL PER MANUFACTURER'S INSTALLATION GUIDE.
9. DIRECT BURIAL CONTROL WIRES TO CONTROL VALVES

LEIT 4004 SOLAR POWERED IRRIGATION CONTROLLER (2)

NTS



LEGEND

1. I-20 ROTOR PER PLAN
2. PVC. SCH. 80 THREADED RISER
3. FINISHED GRADE
4. PLANTING AREA
5. LATERAL FITTING AND UV RESISTANT PIPE
6. HUNTER STAKING KIT
7. ½" Ø REBAR
8. CHECK VALVE
9. FINISH GRADE.
10. BACKFILL SOIL.
11. DIRECT BURIAL CONTROL WIRES TO CONTROL VALVES

I-20 ROTOR AT GRADE ON RIGID RISER WITH CHECK VALVE (3)

NTS

AGENCY APPROVAL

CLIENT

Los Angeles Community College District

LOS ANGELES HARBOR COLLEGE
1111 FIGUEROA PLACE
WILMINGTON, CA 90744

LACCD PROJECT NAME

LOS ANGELES HARBOR COLLEGE STORM WATER IMPLEMENTATION

LACCD PROJECT NUMBER

03H-40J-309.06
03H-40J-309.07
03H-40J-309.08
03H-40J-309.09

BUILDER

DESIGN CONSULTANT

LAND IMAGES
LANDSCAPE ARCHITECTURE
6605 Hollywood Boulevard, Suite 210 | Los Angeles, CA 90028
323-466-4707 | landimages.net

REGISTRATION STAMP

LICENSED ARCHITECT — C-34828 — 08/31/21 RENEWAL DATE — STATE OF CALIFORNIA

REGISTERED LANDSCAPE ARCHITECT — Signature — 09-30-22 Renewal Date — Date — STATE OF CALIFORNIA

ISSUE

MARK	DATE	DESCRIPTION
	02.18.22	RIPARIAN REPLANTING
	07.09.21	DSA BACK CHECK
	05.25.21	100% CONST. DOCUMENTS
	01.27.21	100% CONST. DOCUMENTS
	12.15.20	95% CONST. DOCUMENTS
	10.16.20	90% CONST. DOCUMENTS
	07.14.20	60% DESIGN
	05.12.20	50% SCHEMATIC DESIGN

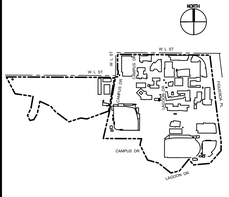
DESIGNER PROJ. NO. R306254.01

DRAWN BY:

CHECKED BY:

SCALE:

KEY PLAN

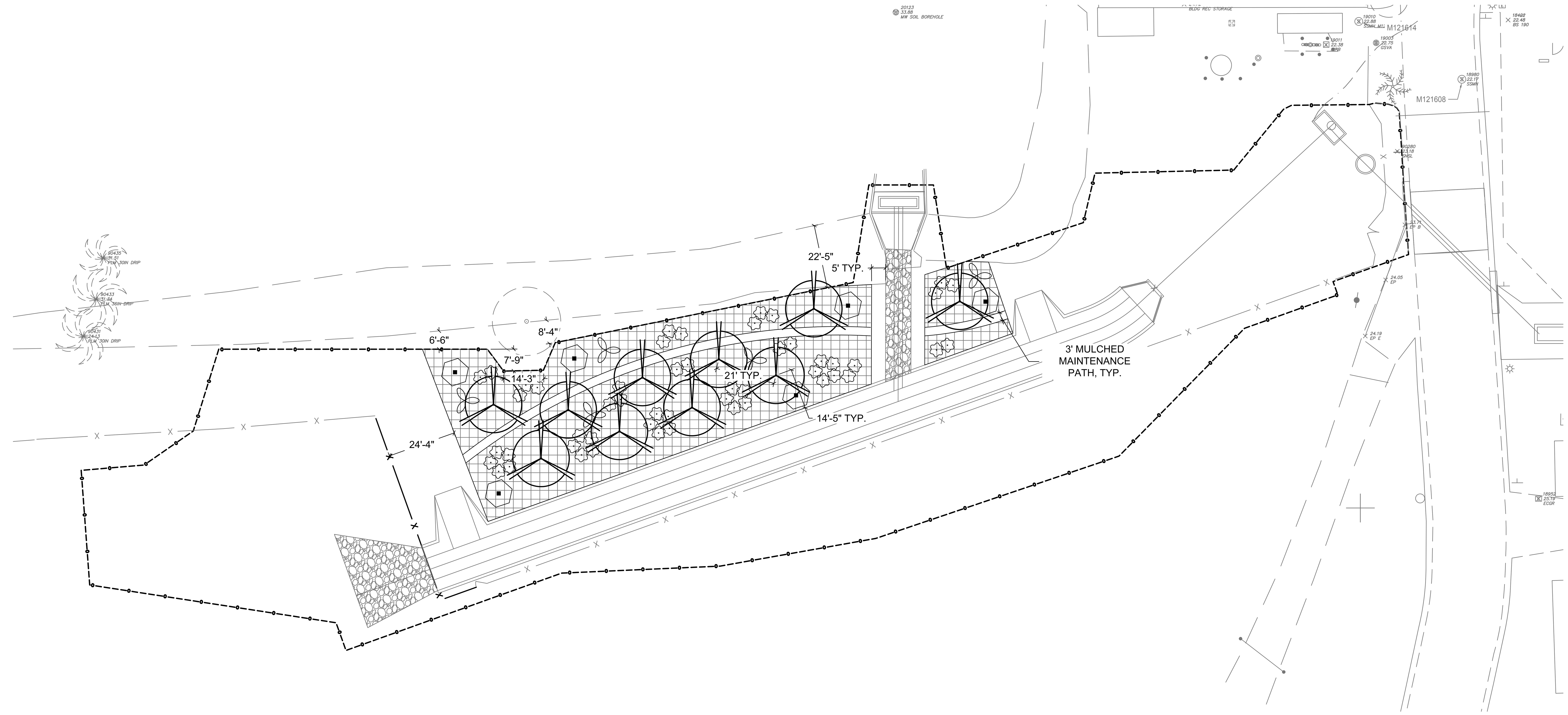


SHEET TITLE

RIPARIAN IRRIGATION DETAILS

SHEET NUMBER

L230



NOTES

0.18 ACRES HABITAT MITIGATION REQUIRED (0.18 ACRES = 7,841 SF)	7,841	SF	REQUIRED
TOTAL VEGETATED MITIGATION AREA	7,855	SF	PROVIDED

PLANT LEGEND - RIPARIAN AREA

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY*	SIZE	MATURE SIZE	CALIFORNIA NATIVE	WATER USE (WUCOLS)	NOTES
	SALIX GOODDINGII	GOODDING'S BLACK WILLOW	10	1 GAL OR CUTTINGS	15-40' H X 25' W	YES	HIGH	
	SAMBUCUS NIGRA SSP. CAERULEA	BLUE ELDERBERRY	5	1 GAL	20-30' H X W	YES	LOW	
	BACCHARIS SALICIFOLIA	MULEFAT	50	1 GAL OR CUTTINGS	6-12' H X 3-9' W	YES	HIGH	
	VITIS GIRDIANA	WILD GRAPE	5	1 GAL	VINING 10-50'	YES	LOW	
	ARTEMISIA DOUGLASIANA	MUGWORT	50	PLUGS	2-3' H X 1.5-3' W	YES	MOD	
	ELYMUS GLAUCUS	BLUE WILDRYE	50		1-5' H X 1' W		LOW	
	ACHILLEA MILLEFOLIUM VAR. CALIFORNICA	CALIFORNIA WHITE YARROW	13%	3 LBS TOTAL	1/3 LB	YES	LOW	S&S SEEDS SEE NOTE THIS SHEET FOR SLURRY MIX
	ESCHSCHOLZIA CALIFORNICA SSP. CALIFORNICA	CALIFORNIA POPPY	25%		3/4 LB	YES	VERY LOW	
	LUPINUS SUCCULENTUS	ARROYO LUPINE	50%		1.5 LB	YES	LOW	
	VERBENA LASIOSTACHYS	CALIFORNIA VERBENA	13%		1/3 LB	YES	LOW	

*QUANTITIES LISTED FOR CONVENIENCE ONLY; CONTRACTOR TO VERIFY

JIM-GEM FORESTRY SUPPLIERS (OR EQUAL) 4" X 36" RIGID SEEDLING PROTECTOR TUBES WITH BAMBOO STAKE TO BE INSTALLED AT EACH PLANT LOCATION, INSTALL PER MNFCT

SUGGESTED PLANT SOURCE

NATIVE WEST NURSERY
RESTORATION QUALITY NATIVE PLANTS
SAN DIEGO, CA
619-423-2284
www.nativewest.com

SUGGESTED SEED SOURCE

S&S SEEDS
CARPENTERIA, CA
805-684-0436
info@ssseeds.com
www.ssseeds.com

HABITAT REPLANTING NOTES:

1. PLANTING PLAN IS DESIGNED TO COMPLY WITH RECOMMENDATION BIO-1 AS OUTLINED IN THE LAHC WEST DRAINAGE BIOLOGICAL RESOURCES TECHNICAL REPORT, SEPTEMBER, 2021.
2. GENERAL PLANTING NOTES FROM SHEET L310 APPLY TO RIPARIAN AREA REPLANTING WITH THE FOLLOWING EXCEPTIONS, ADDITIONS.
3. RESTORATION PLANTING SUBCONTRACTOR TO HAVE MINIMUM 3 YEARS EXPERIENCE INSTALLING NATIVE RESTORATION AREAS OR SIMILAR TYPE PROJECTS.
4. PLANT SPECIES SUBSTITUTIONS WILL NOT BE ACCEPTED. CONTACT PLANT AND HYDROSEED SUPPLIER(S) AS EARLY AS POSSIBLE TO ASSURE PLANT AVAILABILITY.
5. SEEDING AND PLANTING TO OCCUR ONLY AFTER ALL GRADING, CONSTRUCTION AND IRRIGATION INSTALLATION IS COMPLETED.
6. AFTER FINE GRADING, AND INSTALLATION OF IRRIGATION, LIGHTLY TILL THE SOIL. WATER AND ALLOW WEEDS TO SPROUT, REMOVE BY HAND, REPEAT PROCESS. ALLOW 6 WEEKS FOR WEED REMOVAL.
7. AREA TO REMAIN WEED-FREE DURING PLANT ESTABLISHMENT.
8. HYDROSEEDING TO OCCUR AFTER IRRIGATION INSTALLATION AND TREE AND SHRUB PLANTING.

HYDROSEED SLURRY MIX

@ RATE .18 RECOMMENDED PER ACRE QUANTITY
SOURCE: S&S SEEDS

1. HYDROSTRAW MULCH 360 LBS
2. ECOLOGY CONTROLS M-BINDER 18 LBS
3. AM-20 MYCHORRHIZAL INOCULUM 11 LBS
4. TRI-C HUMATE 90 LBS

0 10' 20' 40'
SCALE: 1" = 20'

DIGALERT
DIAL TOLL FREE
1-800-227-2600
AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA

AGENCY APPROVAL

CLIENT

Los Angeles Community College District

LOS ANGELES HARBOR COLLEGE
1111 FIGUEROA PLACE
WILMINGTON, CA 90744

LACCD PROJECT NAME

LOS ANGELES HARBOR COLLEGE
STORM WATER IMPLEMENTATION

LACCD PROJECT NUMBER

03H-40J-309.06
03H-40J-309.07
03H-40J-309.08
03H-40J-309.09

BUILDER

DESIGN CONSULTANT

LAND IMAGES
LANDSCAPE ARCHITECTURE
6605 Hollywood Boulevard, Suite 210 | Los Angeles, CA 90028
323-466-4707 | landimages.net

REGISTRATION STAMP

LICENSED ARCHITECT STEPHEN WHITE No. C-34829 08/31/21 RENEWAL DATE STATE OF CALIFORNIA

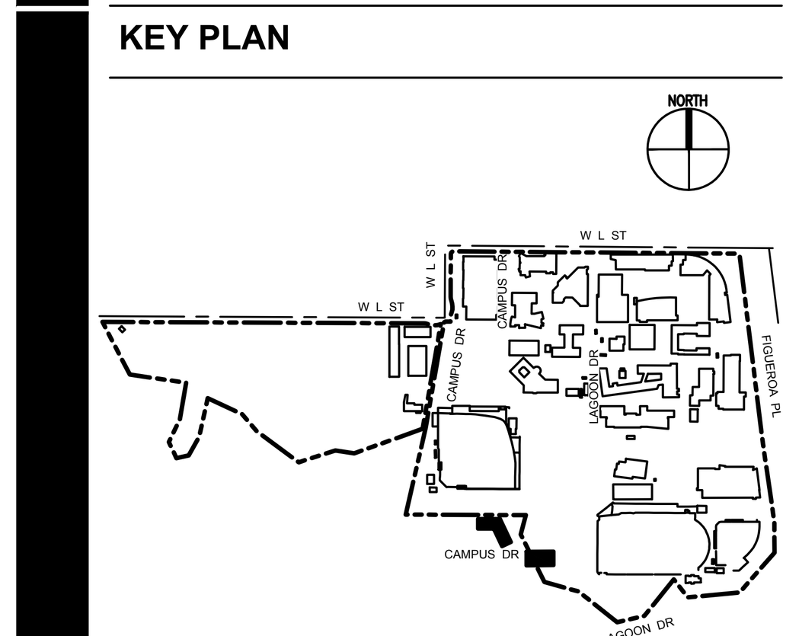
LICENSED LANDSCAPE ARCHITECT

ISSUE

MARK	DATE	DESCRIPTION
	02.18.22	RIPARIAN REPLANTING
	07.09.21	DSA BACK CHECK
	05.25.21	100% CONST. DOCUMENTS
	01.27.21	100% CONST. DOCUMENTS
	12.15.20	95% CONST. DOCUMENTS
	10.16.20	90% CONST. DOCUMENTS
	07.14.20	60% DESIGN
	05.12.20	50% SCHEMATIC DESIGN

DESIGNER PROJ. NO. R306254.01
DRAWN BY:
CHECKED BY:
SCALE:

KEY PLAN



SHEET TITLE

RIPARIAN PLANTING PLAN

SHEET NUMBER

L330

Appendix C

Aquatic Resources Delineation Report

AQUATIC RESOURCES DELINEATION REPORT
Los Angeles Harbor College West Drainage Improvement Project

Prepared for:

BuildLACCD
1055 Corporate Center Drive
Monterey Park, CA 91754

Prepared by:

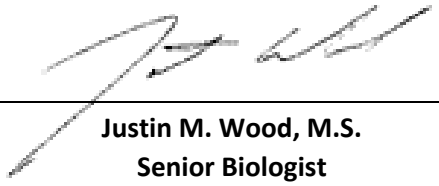
Aspen Environmental Group
615 N. Benson Avenue, Suite E
Upland, CA 91786

Last Updated April 2022

Aquatic Resources Delineation Report

Los Angeles Harbor College West Drainage Improvement Project
Los Angeles County, California

The undersigned certifies that this report is a complete and accurate account of the findings and conclusions of a jurisdictional determination and delineation for the above-referenced project.



Justin M. Wood, M.S.
Senior Biologist
Aspen Environmental Group

April 2022

Contents

List of Tables

List of Attachments

1.0 Introduction

This report presents the findings of an investigation of jurisdictional features conducted by Aspen Environmental Group (Aspen) for the proposed Los Angeles Harbor College (LAHC) West Drainage Improvement Project (project) on behalf of the Los Angeles Community College District (LACCD). The project will alleviate flooding at LAHC that is resulting from accumulated sediment in an earthen channel along the southwestern edge of campus. This report provides baseline information on jurisdictional features to support LACCD's environmental review of the project and acquisition of regulatory permits from the regulatory agencies.

1.1 Lead Agency Name and Address

BuildLACCD
1055 Corporate Center Drive
Monterey Park, CA 91754

1.2 Contact Person and Phone Number

Donald K. McLarty, AIA, NCARB, LEED-AP BD+C
Planning & Support Services Manager
1055 Corporate Center Drive
Monterey Park, CA 91754
Phone: 323.980.2634
Email: Don.mcLarty@build-laccd.org

1.3 Site Access

Driving directions to the project area are provided below in Table 1.

Table 1. Driving Directions to the Project Area

From The Greater Los Angeles Area of Southern California:
Take Interstate 110 south towards Long Beach.
Take exit 3B towards Anaheim Street.
Turn right onto Figueroa Place.
Turn left onto Laguna Drive.
Continue straight onto Campus Drive.
Reach project area across Campus Drive from baseball field.

2.0 Project Description

LACCD proposes to construct a concrete-lined flood control channel to alleviate flooding on the campus of LAHC. The project will include vegetation removal, grading of the new channel alignment, construction of a new concrete channel, and construction of a fence on top of the southern channel wall. The channel will tie into an exist storm drain at the upstream end of the project site and rock will be placed at the downstream end of the project site to dissipate energy from storm flows before the flows enter an existing natural channel that discharges to Machado Lake. In addition to the channel construction, additional vegetation will be cleared to facilitate construction staging and project access. The entire project site may

be impacted by temporary project impacts, but permanent impacts will be limited to the new channel alignment. The project will also include approximately 0.18 acres of on-site habitat restoration.

2.1 Project Location

The project site is located on the west side of LAHC on land owned by LAHC, the City of Los Angeles, and the Los Angeles Department of Water and Power (LADWP), however the concrete channel, fence, and the rock to be placed at the end of the channel will be entirely on land owned by LAHC. More specifically, the proposed channel is located west of Campus Drive, south of Harbor Parks Golf Course and the land formally used for the LAHC Golf Practice Range, and east of Machado Lake (see Figure 1, Attachment 1). The project site is shown on the Torrance, California United States Geological Survey (USGS) 7.5-minute topographic quads. Elevation of the project sites ranges from approximately 15 to 25 feet above mean sea level.

2.2 Topography and Surrounding Land Uses

The project area is located in a small tributary to Machado Lake. Much of the area around Machado Lake has been impacted by historical fill placement to create dry buildable land for LAHC and other development in the region. Machado Lake and the surrounding areas were likely once much more extensive wetlands and connected with the nearby Port of Los Angeles and the Pacific Ocean. Surrounding lands to the west are natural open space, to the south are vacant land, and to the north and east are developed. The topography of the region is relatively flat with Machado Lake forming a depressional area to the west of the project area.

2.3 Vegetation

2.3.1 Methods

Vegetation maps of the project site were created by Aspen Senior Biologist Justin Wood during a site visit on July 21, 2021. Vegetation maps were prepared by drawing tentative vegetation-type boundaries onto high-resolution aerial images during the site visit, then digitizing these boundaries into ArcGIS (Version 10.7). Vegetation in the study area was difficult to distinguish on aerial images due to homogeneous vegetation structure throughout much of the site. The smallest mapping unit was approximately 0.10 acre. Any vegetation map is subject to imprecision for several reasons:

- Vegetation types tend to intergrade on the landscape so that there are no true boundaries in the vegetation itself. In these cases, a mapped boundary represents best professional judgment.
- Vegetation types as they are named and described tend to intergrade; that is, a given stand of real-world vegetation may not fit into any named type in the classification scheme used. Thus, a mapped and labeled polygon is given the best name available in the classification, but this name does not imply that the vegetation unambiguously matches its mapped name.
- Vegetation tends to be patchy. Small patches of one named type are often included within mapped polygons of another type. The size of these patches varies, depending on the minimum mapping units and scale of available aerial imagery.

2.3.2 Results

Vegetation mapping units, descriptions, and names are based on alliance level nomenclature in *A Manual of California Vegetation* (Sawyer et al. 2009). Vegetation data is presented in Table 2 and shown on Figure

3 (Attachment 1). Representative photos and historic aerial imagery are provided in Attachment 2. All plant species observed in the project area are included in Attachment 4.

Gooding's willow - red willow riparian woodland and forest (*Salix gooddingii - Salix laevigata* Forest & Woodland Alliance). Gooding's willow is the dominant willow within the project site. Approximately 10 large Gooding's willows are present in the upstream portion of the project site. These willows are more than thirty feet tall and share a mixed canopy with the non-native trees such as Chinese elm (*Ulmus parvifolia*), gum (*Eucalyptus* sp.) and shamel ash (*Fraxinus uhdei*). The understory is sparse and also dominated by non-native species. Gooding's willow - red willow riparian woodland and forest are recognized as a sensitive natural community by the California Department of Fish and Wildlife (CDFW; CDFW, 2021).

Mulefat thickets (*Baccharis salicifolia* Shrubland Alliance). Mulefat thickets are dominated by mulefat (*Baccharis salicifolia*). The mulefat within the project site is sparse and interspersed with several non-native vegetation types. The sparseness of the vegetation and poor quality of the habitat makes this habitat less suitable for special-status riparian bird species.

Himalayan blackberry - rattlebox - edible fig riparian scrub (*Rubus armeniacus - Sesbania punicea - Ficus carica* Shrubland Semi-Natural Alliance). Himalayan blackberry riparian scrub is present in the more mesic portions of the project site. Himalayan blackberry (*Rubus armeniacus*) is an invasive species and it is growing along with other non-native species such as curly dock (*Rumex crispus*) and prickly lettuce (*Lactuca seriola*).

Eucalyptus - tree of heaven - black locust groves (*Eucalyptus* spp. - *Ailanthus altissima - Robinia pseudoacacia* Woodland Semi-Natural Alliance). The majority of the vegetation within the project site is dominated by non-native trees that were likely planted or escaped from nearby plantings. These include Chinese elm, gum, shamel ash, fig tree (*Ficus* sp.), and date palm (*Phoenix* sp.).

Poison hemlock or fennel patches (*Conium maculatum - Foeniculum vulgare* Herbaceous Semi-Natural Alliance). Poison hemlock patches were mapped throughout much of the low-flow channel. It is dominated by poison hemlock (*Conium maculatum*), black mustard (*Brassica nigra*), and other non-native species. The poison hemlock is growing adjacent to the mulefat thickets and Himalayan blackberry riparian scrub.

Upland mustards or star-thistle fields [*Brassica nigra - Centaurea* (*solstitialis, melitensis*) Herbaceous Semi-Natural Alliance]. Upland mustard fields were mapped throughout the disturbed uplands in the project site. This vegetation is dominated by black mustard, white horehound (*Marrubium vulgare*), mustard (*Hirschfeldia incana*), and non-native grasses. This community is also highly disturbed by homeless activities.

Developed. Two portions of the project site were mapped as developed. This include a concrete drainage structure and a LAHC facility. These areas are primarily unvegetated but are adjacent to ruderal areas mapped as upland mustards or star-thistle fields.

Table 2. Vegetation and Land Cover by Acreage within the Project Site.

Vegetation and Land Cover Type	Project Site (acres)
Riparian Vegetation	
Goodding's willow - red willow riparian woodland and forest	0.07
Mulefat thickets	0.06
Himalayan blackberry - rattlebox - edible fig riparian scrub	0.14

Table 2. Vegetation and Land Cover by Acreage within the Project Site.

Vegetation and Land Cover Type	Project Site (acres)
Upland Vegetation	
Eucalyptus - tree of heaven - black locust groves	1.21
Poison hemlock or fennel patches	0.23
Upland mustards or star-thistle fields	0.57
Other Cover Types	
Developed	0.02
Total:	**2.30**

2.3 Climate

Climate in the region is characterized by hot dry summers and cool wet winters. Roughly 75 percent of the rain falls from December through March. Average annual rainfall recorded at the Los Angeles County Public Works Rolling Hills weather station, located approximately 3 miles to the southwest, is 13.63 inches (34.62 cm; Los Angeles County Public Works, 2021). Seasonal rainfall variability is extremely high in the region and during the 2020-2021 rainfall year 4.66 inches (11.83 cm) was recorded in the region, about 34% of the average rainfall for this station (Los Angeles County Public Works, 2021).

2.4 Hydrology and Geomorphology

The project area is located in a small ephemeral stream channel that conveys storm flows from LAHC to the nearby Machado Lake. The stream channel has received sediment deposition for many years and may date back to 1949 when LAHC was constructed. The flat topography and minimal storm flows have compounded the drainage problems in the project area. The proposed channel will alleviate the flooding of the campus of LAHC and will still convey flows to Machado Lake. Machado Lake forms a depressional area to the west of the project area that captured most of the surface flows in the region. As Machado Lake fills, the water enters a series of storm drains and eventually reaches the Pacific Ocean. The Pacific Ocean is recognized by the U.S. Army Corps of Engineers (USACE) as traditional navigable water (TNW) thereby establishing surface connectivity of the project area to TNW.

The project area is shown as Freshwater Forested/Shrub Wetland habitat in the National Wetland Inventory (USFWS, 2021). The upstream portion of the project area is mapped as Palustrine (P), Forested (FO), Temporary Flooded (A) and the downstream portion is mapped as Palustrine (P), Scrub-Shrub (SS), Temporary Flooded (A).

The project area is located within the Coastal Plain of Los Angeles Groundwater Basin (CDWR, 2021). The Coastal Plain of Los Angeles Groundwater Basin is located entirely within the South Coast Hydrologic Region as designated by the California Regional Water Quality Control Board (CDWR, 2021).

2.5 Soils and Geology

Historic soil data from the National Resource Conservation Society (NRCS) were reviewed to identify any hydric soils documented in the project area. Two soil types are mapped within the project area and none of these are hydric soils (see Figure 2, Attachment 1). Series descriptions are also provided below based on descriptions in *Official Soil Series Descriptions and Series Classification* (NRCS, 2021).

Urban land-Aquic Xerorthents, fine substratum-Cropley complex, 0 to 5 percent slopes. Urban land-Aquic Xerorthents, fine substratum-Cropley complex is a moderately well-drained soil found on alluvial fans and consists of discontinuous human-transported material over mixed alluvium. It is found in areas

with 0 to 5 percent slopes at elevations of about 0 to 240 feet. Water table depth is typically more than 80 inches, and these areas are rarely flooded. The substrate is comprised of clay loam (0-5 inches) and clay (5-79 inches).

Urban land-Thums-Windfetch complex, 0 to 5 percent slopes. Urban land-Thums-Windfetch complex is a well-drained soil found on terraces and consists of human-transported material over alluvium and/or palustrine estuarine deposits. It is found in areas with 0 to 5 percent slopes at elevations of about 0 to 110 feet. Water table depth is typically more than 80 inches, and these areas are rarely flooded. The substrate is comprised of clay loam (0-10 inches), clay (10-45 inches), and clay loam (45-79 inches).

3.0 Regulatory Background

Jurisdictional waters in the project area, including some wetlands and riparian habitats, are likely to be regulated by the USACE, Los Angeles Regional Water Quality Control Board (LARWQCB) and the CDFW. The USACE Regulatory Program regulates activities pursuant to Section 404 of the federal Clean Water Act (CWA), the LARWQCB regulates activities under Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act, while the CDFW regulates activities under the Fish and Game Code Section 1600-1607. Recent changes in administration and subsequent revision to the Waters of the U.S. Rule have resulted in ephemeral stream channels once again being regulated by the USACE. Additional details on this and regulatory framework are provided below.

3.1 Section 404 of the CWA

Section 404 of the CWA regulates the discharge of dredged material, placement of fill material, or certain types of excavation within "Waters of the U.S." (resulting in more than incidental fallback of material) and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. Permits can be issued for individual projects (individual permits) or for general categories of projects (general permits). "Waters of the U.S." are defined by the CWA as "rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands." Wetlands are defined by the CWA as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." The United States Environmental Protection Agency (USEPA) updated the CWA and their definition of navigable waters in 2020 (USACE and USEPA, 2020). The Navigable Waters Protection Rule regulates the nation's navigable waters and the core tributary systems that provide perennial or intermittent flows into these systems. As such, "Waters of the U.S." encompass traditional navigable waters; perennial and intermittent tributaries that contribute surface waters flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters. Based on this ruling, ephemeral waters would not have been "Waters of the U.S." In 2021, the EPA and USACE were directed by the Biden Administration and the U.S. District Court to vacate the 2020 Navigable Waters Protection Rule and revert to the pre-2020 rule. This revision of the Waters of the U.S. Rule means that ephemeral drainages are once again treated as "Waters of the U.S."

3.2 Porter-Cologne Water Quality Control Act and Section 401 of the CWA

Section 401 of the CWA requires that any applicant for a Federal permit for activities that involve a discharge to 'waters of the State,' shall provide the Federal permitting agency a certification from the State in which the discharge is proposed, that states the discharge will comply with the applicable provisions under the Federal Clean Water Act. Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification from the Regional Water

Quality Control Board (RWQCB). Applications to the RWQCB must include a complete CEQA document (e.g., Initial Study/Mitigated Negative Declaration).

3.3 Section 1602 of the California Fish and Game Code

Section 1602 of the California Fish and Game Code requires any person, State or local governmental agency, or public utility which proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or use materials from a streambed, or result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, to first notify the CDFW of the proposed project. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. Based on the notification materials submitted, the CDFW will determine if the proposed project may impact fish or wildlife resources. If the CDFW determines that a proposed project may substantially adversely affect existing fish or wildlife resources, a Lake or Streambed Alteration Agreement (SAA) will be required. A completed CEQA document must be submitted to CDFW before a SAA will be issued.

4.0 Waters and Wetlands Delineation Methodology

The assessment of jurisdictional wetlands, other waters of the U.S., waters of the State, and riparian habitat was conducted by Aspen biologist Justin Wood on July 21, 2021. Prior to conducting the field assessment Mr. Wood reviewed current and historic aerial photographs (see Attachment 2), the Los Angeles County Soil Survey (NRCS, 2021), and the National Wetland Plant List (Lichvar et al. 2016) to evaluate the potential active channels and wetland features in the project area.

Site maps were generated with available aerial photographs and potentially jurisdictional features were identified and marked with lines and global positioning system (GPS) coordinates to assist in field verification. During the field assessment, vegetation and hydrology were mapped using a Trimble Geo 7X GPS unit and identified on aerial photographs. Field maps were digitized using Global Information System (GIS) and total area of jurisdictional features were calculated.

4.1 Federal Wetlands

Federal wetlands are delineated using the USACE Wetland Delineation Manual (1987) and the Arid West Supplement (2008) based on three wetland parameters: hydrophytic vegetation, wetland hydrology, and hydric soils. Two wetland sample locations were assessed to determine if federal wetlands were present. These wetland sample locations were in and adjacent to the wettest portion of the project area where the three wetland parameters were most likely to be present (see Figure 4, Attachment 1).

4.2 Federal Non-Wetland Waters

Jurisdictional non-wetland waters of the U.S. were delineated based on the limits of the Ordinary High-Water Marks (OHWM) as determined by physical and biological features such as bank erosion, deposited vegetation, sediment, or debris, and vegetation characteristics. OHWM Datasheets are provided in Attachment 3 and provide additional site-specific details.

4.3 CDFW Jurisdictional Streambeds and Vegetation

CDFW jurisdiction was delineated to the tops of the channel banks or to the edge of the adjacent riparian vegetation, where present. Within most of the project area, CDFW jurisdictional waters were mapped to the top of the bank which was narrow and included patches of native and non-native riparian vegetation. In several locations the CDFW jurisdiction extended to the edge of the Gooding's willow - red willow riparian woodland and forest, mulefat thickets, and Himalayan blackberry - rattlebox - edible fig riparian scrub.

4.4 LARWQCB Wetlands and Waters of the State

The California Water Resource Control Board (CWRCB) issued new procedures which went into effect in May 2020 (CWRCB, 2020). These procedures expanded the definition of wetlands to include areas that may not meet the definition of a wetland based on the USACE Wetland Delineation Manual and Regional Supplements. Areas that may be included as wetlands per the new procedures include areas that are unvegetated but otherwise meet the criteria of federal wetlands, any natural wetlands, wetlands created by a modification to waters of the state, and wetlands that have formed as a result of historic human activity. LARWQCB jurisdiction non-wetland waters of the State were delineated based on tops of the channel banks, as described above for CDFW and to a lesser extent, OHWM as determined by changes in physical and biological features, such as bank erosion, deposited vegetation or debris, and vegetative characteristics.

5.0 Results

Three categories of jurisdictional features were documented within the project area: USACE non-wetland Waters of the U.S, LARWQCB Wetlands and Waters of the State, and CDFW jurisdictional streambeds and riparian vegetation (refer to Figure 4, Attachment 1). No federally jurisdictional wetlands were mapped because the site lacked a dominance of hydrophytic vegetation as discussed below. Table 3 and Figure 4 (Attachment 1) show the locations and acreages of jurisdictional features in the project area. Attachment 3 contains the Wetland Determination Data Forms and Arid West OHWM Datasheets that were completed during the assessment. The jurisdiction within the project area are summarized below in Table 3.

Table 3. Acreage of Jurisdictional Features within the Project Area.

Jurisdiction	Area (acres)	Average Channel Width (feet)	Channel Length (feet)
USACE Non-wetland Waters of the U.S.	0.03	2.5	483
LARWQCB Wetlands and Waters of the State	0.03	2.5	483
CDFW Streambeds and Vegetation	0.18	3.5	483

The ephemeral streambed in the project area supports short duration flows after storm events. It has a clearly defined bed and bank and has other indicators of flows such as sediment and drift deposits. It is dominated by non-native species with the exception of several Gooding's willows and mulefat that were mapped. There is a small area of ponded water that supports wetland hydrology and hydric soils but lacks a dominance of hydrophytic vegetation. This wetland is likely to fall under the jurisdiction of the LARWQCB and CDFW. The area of this wetland is approximately 80 square feet and is not large enough to map separately from the acreage summarize above.

5.1 Federal Wetlands

Based on the field assessment, including the wetland sample locations, federal wetlands are absent from the project area due to lack of three wetland parameters. The project site lacks a dominance of hydrophytic vegetation.

5.2 Federal Non-Wetland Waters

Based on this assessment of OHWMs, the flow frequency, downstream connectivity, and Aspen's professional opinion, 0.03 acres of the stream channel within the project area is likely to be under the jurisdiction of the USACE as non-wetland Waters of the U.S. The channel flows are ephemeral and flow for a short period of time after storms. The flows enter Machado Lake and eventually reach the Pacific Ocean, a TNW. As stated above, the recent change in the definition of Waters of the U.S. causes these ephemeral drainages to now be treated as Waters of the U.S. A summary of the aquatic resources present within the project area is provided as Attachment 5.

5.3 CDFW Streambeds and Vegetation

Based on this assessment and Aspen's professional opinion, approximately 0.04 acres of jurisdictional streambeds are present in the project area (Table 3 of this report and Figure 4 in Attachment 1). An additional 0.14 acres of riparian vegetation mapped as Goodding's willow - red willow riparian woodland and forest and mulefat thickets are also present and extend beyond the limits of the streambed and are likely to be under the jurisdiction of CDFW (Table 3 of this report and Figure 4 in Attachment 1). These conclusions are primarily based on the presence of bed and bank and limits of the native riparian vegetation.

5.4 LARWQCB Wetlands and Waters of the State

Based on this assessment and Aspen's professional opinion, approximately 0.03 acres of jurisdictional stream channels are present in the project area (Table 3 of this report and Figure 4 in Attachment 1). The LARWQCB jurisdiction of the stream channel in the project area is the same as the CDFW jurisdiction based on recent guidelines and regulations from LARWQCB. This 0.02 acres (1,200 square feet) includes a small area of wetlands that lack hydric vegetation. The wetlands are approximately 80 square feet and located near the upstream end of the project area.

6.0 Conclusion

The project area includes USACE waters of the U.S., LARWQCB wetlands and waters of the state, and CDFW jurisdictional streambeds and vegetation as follows:

- 0.03 acres of USACE jurisdictional non-wetland waters of the U.S.
- 0.03 acres of LARWQCB wetlands and waters of the state.
- 0.04 acres of CDFW Jurisdictional Streambed and 0.14 acres of CDFW jurisdictional vegetation beyond the streambed.

The conclusions presented above represent Aspen's professional opinion based on our knowledge and experience with the USACE, LARWQCB, and CDFW, including the applicable regulatory guidance documents and manuals. However, these agencies have final authority in determining the status and presence of jurisdiction and the extent of the boundaries.

7.0 References

California Department of Fish and Wildlife (CDFW). 2021. California Sensitive Natural Communities. [online]: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline Accessed August 2021.

California Department of Water Resources (CDWR). 2021. Sustainable Groundwater Management Act (SGMA) Data Viewer. [Online]: Https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer#gwlevels Accessed September 2021.

CWRCB (California Water Resources Control Board). 2020. Draft Guidance for the State Wetland Definition and Procedures for Discharges of dredged or Fill Material to Waters of the State.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. *Phytoneuron* 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X

Los Angeles County Public Works. 2021. Season Total Rainfall Duration for Cogswell Dam. [Online]: https://dpw.lacounty.gov/wrd/rainfall/ Accessed August 2021.

Natural Resource Conservation Service (NRCS). 2021. Web Soil Survey 2.0. [online]: http://websoilsurvey.nrcs.usda.gov/ Accessed August 2021.

Sawyer, John O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation; 2nd Edition. California Native Plant Society, Sacramento, California.

U.S. Army Corps of Engineers (USACE). 1987. U.S. Army Cops Wetland Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station. Vicksburg, MS.

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

USACE and EPA. (US Environmental Protection Agency). 2020. The Navigable Waters Protection Rule: Definition of "Waters of the United States." Final rule, prepublication copy issued January 23, 2020, pending publication in Federal Register. .

U.S. Fish and Wildlife Service (USFWS). 2021. National Wetland Inventory. [Online]: https://www.fws.gov/wetlands/data/Mapper.html Accessed September 2021.

Attachment 1 – Figures

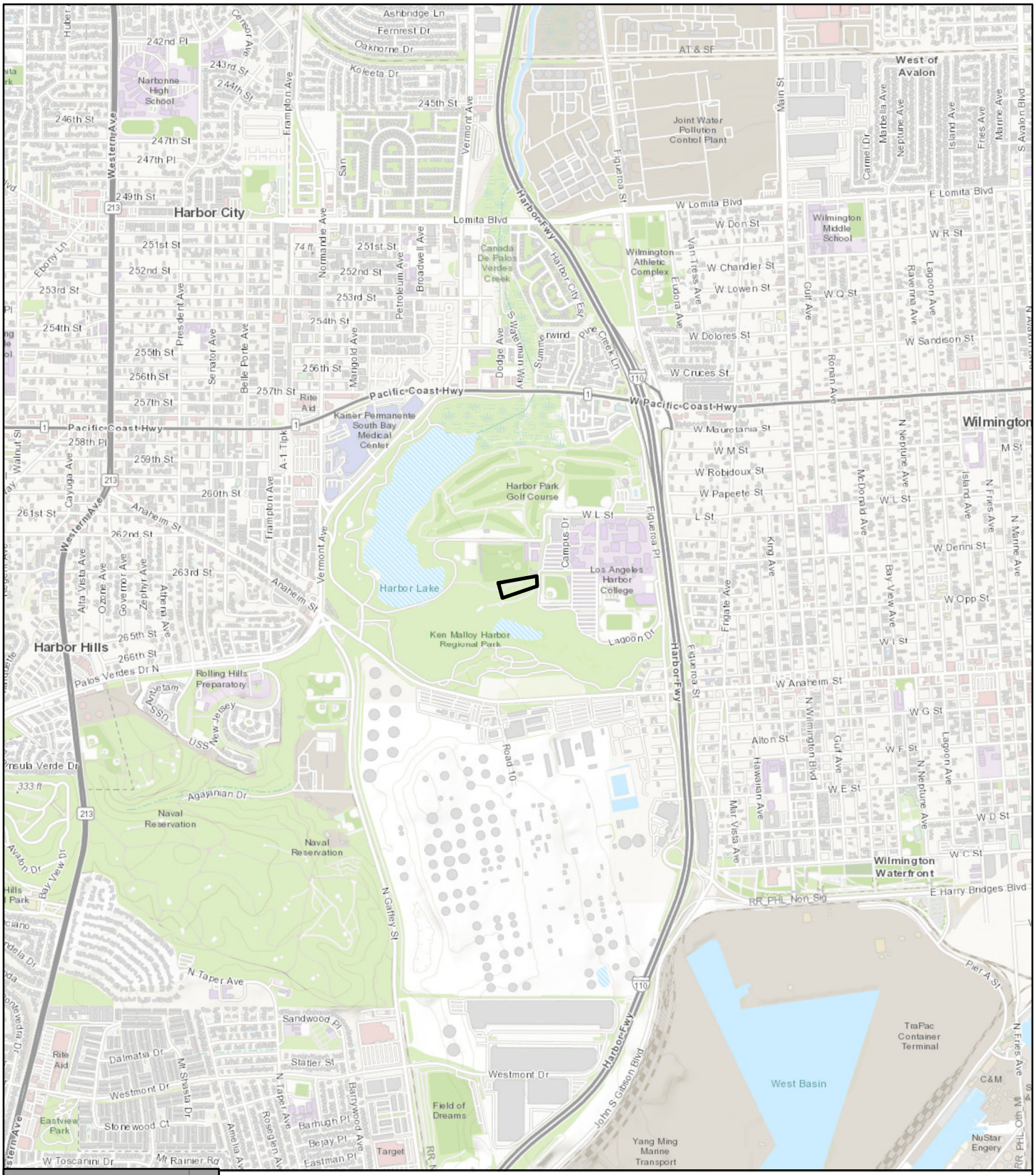


FIGURE 1
Project Overview

Project Site

Soil Types

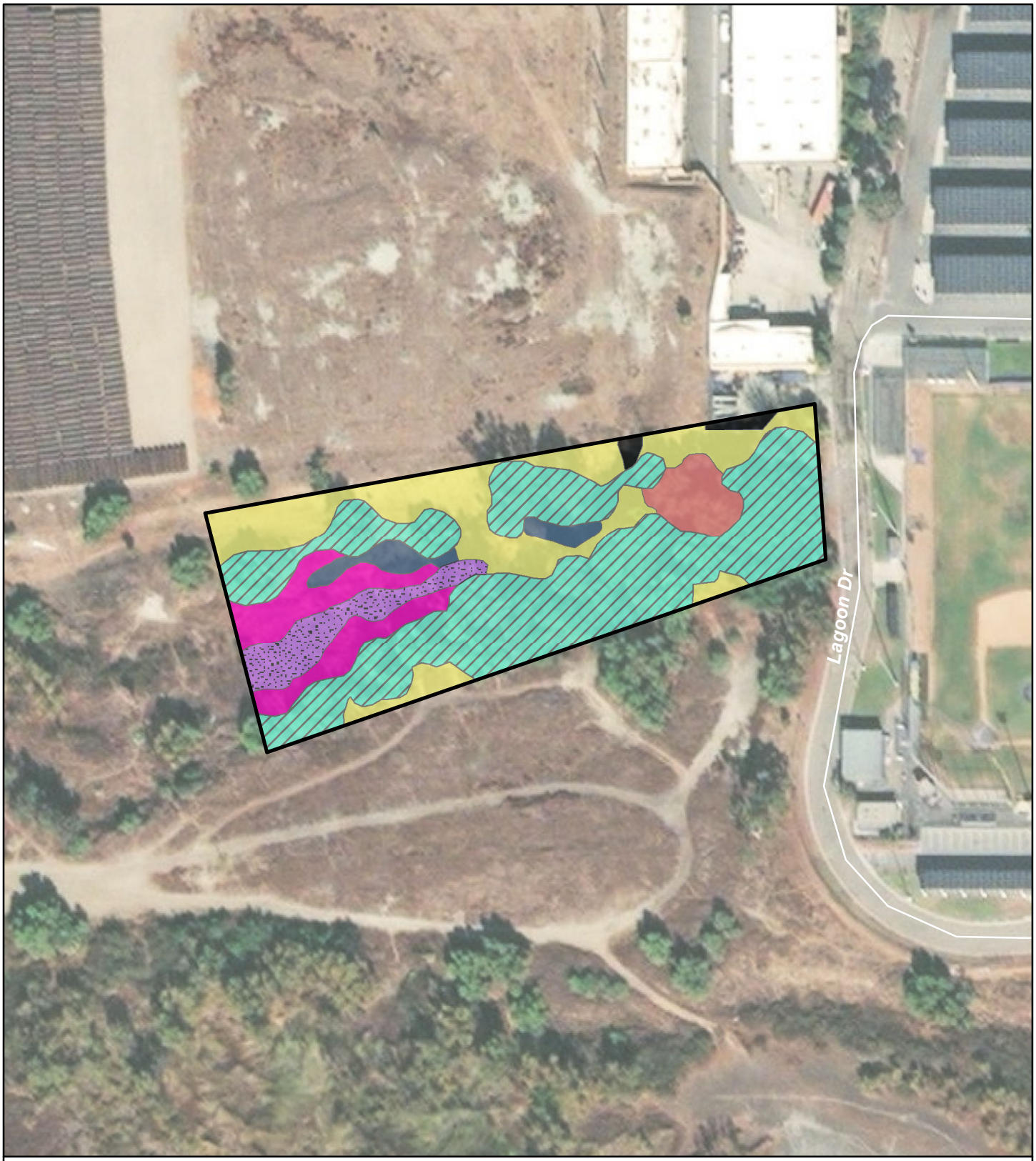
1014: Urvan land-Aquic Xerothents, fine substratum-Cropley complex, 0 to 5 percent slopes (0.98 ac)

1132: Urban land-Thums-Windfetch complex, 0 to 5 percent slopes (1.32 ac)

FIGURE 2
Soils

N

50 0 50
Feet



Project Site

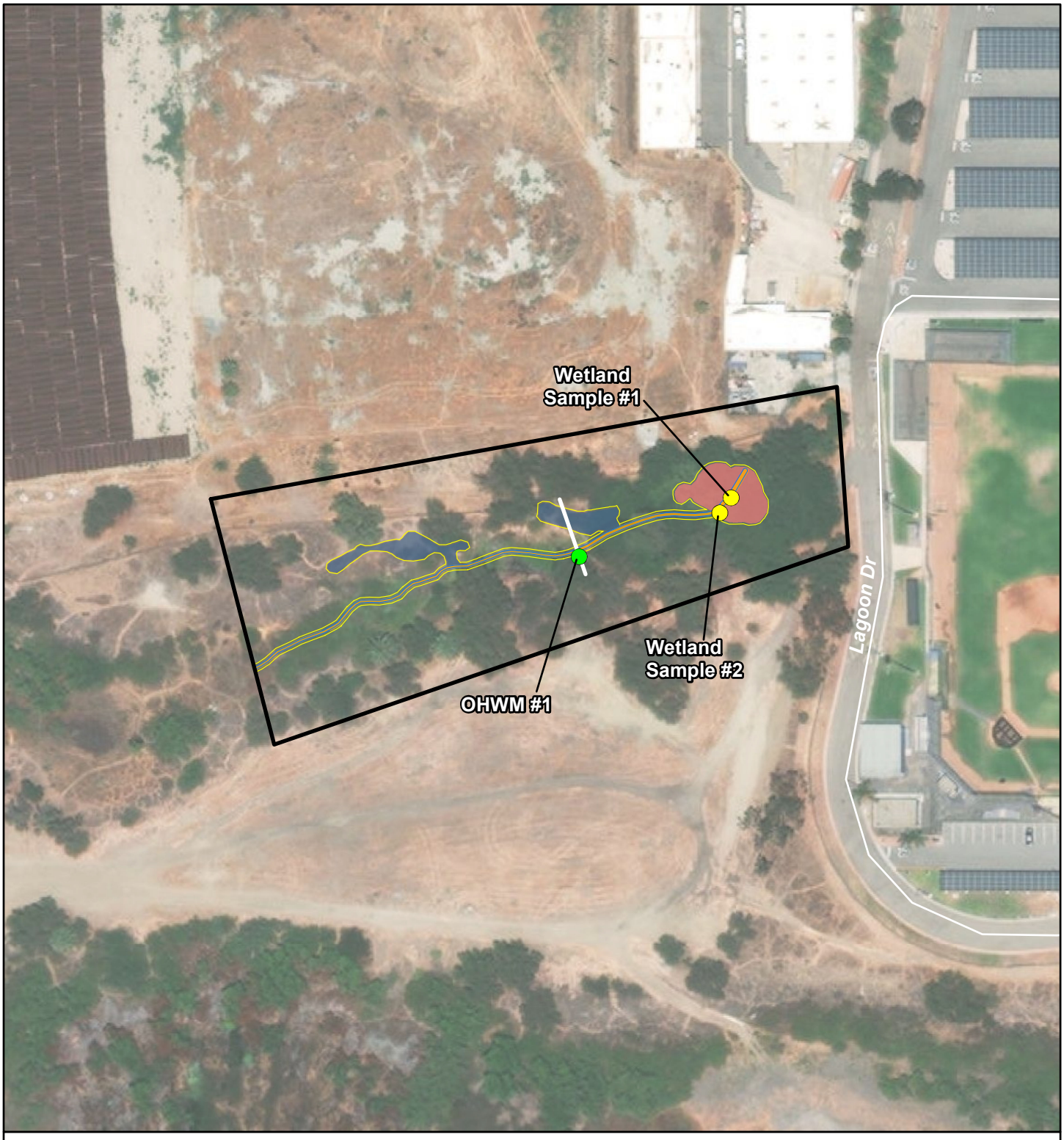
Vegetation and Land Cover Types

- Developed (0.03 ac)
- Eucalyptus - tree of heaven - black locust groves (1.20 ac)
- Goodding's willow - red willow riparian woodland and forest (0.10 ac)
- Himalayan blackberry - rattlebox - edible fig riparian scrub (0.14 ac)
- Mulefat thickets (0.08 ac)
- Poison hemlock or fennel patches (0.22
- Upland mustards or star-thistle fields (0.53

FIGURE 3
Vegetation and Land Cover

N

50 0 50
Feet



Project Site

CDFW Streambed and Vegetation (0.18 ac)

USACE Waters of the U.S. and LARWQCB Waters of the State (0.03 ac)

Transect

Vegetation and Land Cover Types

Goodding's willow - red willow riparian woodland and forest (0.07 ac)

Mulefat thickets (0.06 ac)

FIGURE 4

Jurisdictional Waters

N

50 0 50

Feet

Attachment 2 – Project Photos

Photo 1: Small stagnant pool that supports jurisdictional wetlands near an existing storm drain.

Photo 2: Downstream extent of the jurisdictional wetlands.

Photo 3: Hydric soils (gleyed matrix) observed at wetland sample location.

Photo 4: View of a small patch of mulefat thickets within the project site.

Photo 5: Sparse understory of the non-native woodland within the project site.

Photo 6: Downstream view of dense non-native growth within the project site.

Photo 7: Typical view on non-native blackberries on the project site.

Photo 8: Downstream view of on non-native blackberries within the project site.

Photo 9: Aerial image of the project area from February of 2021.


Photo 10: Aerial image of the project area from October of 1962.


Photo 11: Aerial image of the project area from July of 1932.

Attachment 3 – Wetland Determination Data Forms OHWM Datasheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: LAHC West Channel City/County: Wilmington/Los Angeles Sampling Date: 7/21/21

Applicant/Owner: Los Angeles Coummity College District State: CA Sampling Point: #1

Investigator(s): Justin Wood Section, Township, Range: 31, 4S, 13W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR): California Lat: 33.783304 Long: -118.287491 Datum: -

Soil Map Unit Name: Urban land-Thums-Windfetch complex, 0 to 5 percent slopes NWI classification: PFOA

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

Are Vegetation ✔, Soil _____, or Hydrology ✔ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ 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 ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m x 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus uhdei	20	Yes	N/A
2. Ulmus parvifolia	20	Yes	UPL
3. Salix gooddingii	15	Yes	FACW
4. Ficus sp.	10	No	N/A
	65	= Total Cover	
Sapling/Shrub Stratum (Plot size: 1m x 1m)			
1. Ulmus parvifolia	20	Yes	UPL
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 1m x 1m)			
1. Stenotaphrum secundatum	5	Yes	FAC
2. Stipa miliacea	5	Yes	N/A
3. Cyperus eragrostis	5	Yes	FACW
4. Ehrharta erecta	5	Yes	N/A
5.			
6.			
7.			
8.			
	20	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 38% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 20	x 2 =	40
FAC species 5	x 3 =	15
FACU species	x 4 =	
UPL species 25	x 5 =	125
Column Totals: 50 (A)		180 (B)

Prevalence Index = B/A = 3.6

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 ✔

Remarks:

The vegetation is heavily disturbed and dominated by non-native ruderal species.

SOIL

Sampling Point: #1

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
0-6	10YR 3/1	100					Sand	
6-12	GLEY 2 2.5/10G	100					Silty sand	

[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)
- ✔ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ___ 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 ___ Depth (inches): _____

Water Table Present? Yes ✔ No ___ Depth (inches): 6

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

Wetland Hydrology Present? Yes ✔ No ___

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

Remarks:

Small isolated pool approximately 3 feet deep, 4 feet wide, and 10 feet long. Fed from runoff of LAHC and formed by sedimentation over many years.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: LAHC West Channel City/County: Wilmington/Los Angeles Sampling Date: 7/21/21

Applicant/Owner: Los Angeles Coummity College District State: CA Sampling Point: #2

Investigator(s): Justin Wood Section, Township, Range: 31, 4S, 13W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): 0-1

Subregion (LRR): California Lat: 33.783267 Long: -118.287524 Datum: -

Soil Map Unit Name: Urban land-Thums-Windfetch complex, 0 to 5 percent slopes NWI classification: PFOA

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

Are Vegetation ✔, Soil _____, or Hydrology ✔ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ 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 ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m x 5m)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus uhdei	25	Yes	N/A
2. Ulmus parvifolia	10	Yes	UPL
3. Salix gooddingii	10	Yes	FACW
4.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: 1m x 1m)			
1. Ulmus parvifolia	20	Yes	UPL
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 1m x 1m)			
1. Stenotaphrum secundatum	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 10	x 2 =	20
FAC species 5	x 3 =	15
FACU species	x 4 =	
UPL species 30	x 5 =	150
Column Totals: 45 (A)		185 (B)

Prevalence Index = B/A = 4.11

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 ✔

Remarks:

The vegetation is heavily disturbed and dominated by non-native ruderal species.

SOIL

Sampling Point: #2

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
0-6	10YR 2/1	100					Loam	
6-8	10YR 4/3	100					Sandy loam	
8-	10YR 4/1	100					Loam	

[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)
- ___ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ 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 ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

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

Remarks:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: LA Harbor College channel
Project Number: 3416.001
Stream: Unnamed
Investigator(s): Justin Wood

Date: 4/4/2022 **Time:** 12:20
Town: Wilmington **State:** CA
Photo begin file#: **Photo end file#:**

Y ☐ / N ☒ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:
Unnamed Channel at L.A. Harbor College

Projection: Mercator **Datum:** NAD 83
Coordinates: 33.783159, -118.287934

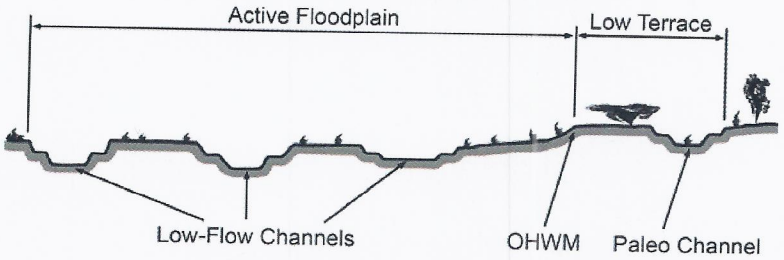
Potential anthropogenic influences on the channel system:
Channel is heavily impacted by development, channelization, homeless activity, and other activities.

Brief site description:
Unnamed channel fed by runoff from college and city property.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 7/1932, 10/1962, 2/2021
- ☒ Topographic maps
- ☐ Geologic maps
- ☒ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ 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

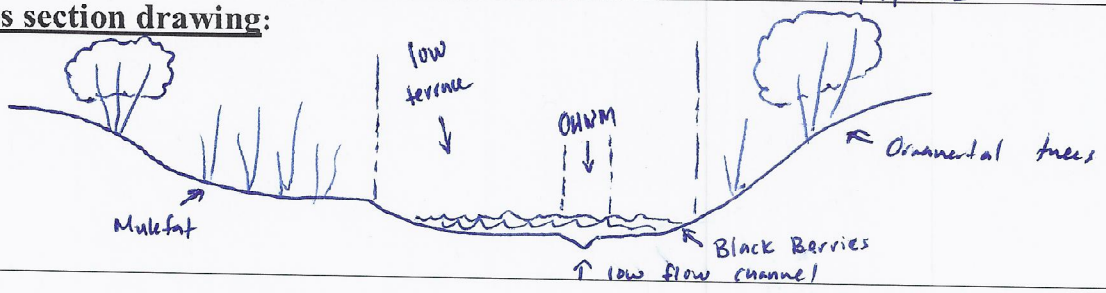


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☒ GPS
   - ☐ Other:

Project ID: 3416.001 **Cross section ID:** 1 **Date:** 4/4/2022 **Time:** 12:20

Cross section drawing:



OHWM

GPS point: 33.783157, -118.287933

Indicators:

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

Comments:

Poorly defined low-flow channel with dense vegetation composed of black berry. Slight break in cover percent.

Floodplain unit:

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

GPS point: 33.783157, -118.287933

Characteristics of the floodplain unit:

Average sediment texture: Sandy loam

Total veg cover: 80 % Tree: ____ % Shrub: ____ % Herb: 80 % woody vines

Community successional stage:

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

Indicators:

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

Comments:

Poorly defined

Project ID: 3416.001 **Cross section ID:** 1 **Date:** 4/4/2022 **Time:** 12:20

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: 33.783172, -118.287939

Characteristics of the floodplain unit:

Average sediment texture: Loam

Total veg cover: 100 % Tree: ____ % Shrub: ____ % Herb: 100 % woody vines

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:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: ____

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 4 – Observed Species List

Latin Name	**Common Name**	**Wetland Indicator Status[1]**
VASCULAR PLANTS		
Dicotyledons		
PINACEAE	PINE FAMILY	
* *Pinus* sp.	Unid. ornamental	NI
ADOXACEAE	MUSKROOT FAMILY	
Sambucus nigra ssp. *cerulea*	Blue elderberry	FACU
ANACARDIACEAE	SUMAC or CASHEW FAMILY	
* *Schinus molle*	Peruvian pepper tree	FACU
APIACEAE	CELERY FAMILY	
* *Conium maculatum*	Poison hemlock	FACW
* *Foeniculum vulgare*	Fennel	NI
ASTERACEAE	ASTER FAMILY	
Baccharis salicifolia	Mule fat	FAC
* *Carduus pycnocephalus*	Italian thistle	NI
* *Glebionis coronaria*	Garland daisy	NI
* *Helminthotheca echioides*	Bristly ox-tongue	FAC
* *Lactuca serriola*	Prickly lettuce	FACU
BASALLACEAE	MADEIRA-VINE FAMILY	
* *Anredera cordifolia*	Mignonette vine	NI
BRASSICACEAE	MUSTARD FAMILY	
* *Brassica nigra*	Black mustard	NI
* *Hirschfeldia incana*	Shortpod mustard	NI
* *Raphanus sativus*	Wild radish	NI
GERANIACEAE	GERANIUM FAMILY	
* *Geranium dissectum*	Cut-leaved geranium	NI
LAMIACEAE	MINT FAMILY	
* *Marrubium vulgare*	Horehound	FACU
MORACEAE	MULBERRY FAMILY, FIG FAMILY	
* *Ficus* sp.	Unid. ornamental	NI
MYRTACEAE	MYRTLE FAMILY	
* *Eucalyptus* sp.	Ornamental eucalyptus	NI
OLEACEAE	OLIVE FAMILY	
* *Fraxinus udhei*	Shamel ash (escaped ornamental)	NI
PASSIFLORACEAE	PASSION FLOWER FAMILY	
* *Passiflora caerulea*	Bluecrown passionflower	NI
PITTOSPORACEAE	PITTOSPORUM FAMILY	
* *Pittosporum tobira*	Mock orange	NI
POLYGONACEAE	BUCKWHEAT FAMILY	
* *Rumex crispus*	Curly dock	FAC
ROSACEAE	ROSE FAMILY	
* *Prunus persica*	Peach (escape from cultiv.)	NI
* *Pyracantha sp.*	Ornamental pyracantha	NI
* *Rubus armeniacus*	Himalayan blackberry	FAC
SALICACEAE	WILLOW FAMILY	
Salix gooddingii	Goodding's black willow	FACW
TAMARICACEAE	TAMARISK FAMILY	
* *Tamarix aphylla*	Athel	FAC

ULMACEAE	ELM FAMILY	
* *Ulmus parviflora*	Chinese elm	UPL
VITACEAE	GRAPE FAMILY	
Vitis girdiana	Wild grape	FAC

Monocotyledons		
AGAVACEAE	CENTURY PLANT FAMILY	
Yucca baccata	Banana yucca, fleshy-fruited yucca	NI
ARECACEAE	PALM FAMILY	
* *Phoenix canariensis*	Canary Island palm	NI
CYPERACEAE	SEDGE FAMILY	
Cyperus eragrostis	Tall umbrella sedge	FACW
POACEAE	GRASS FAMILY	
* *Bromus diandrus*	Ripgut brome	NI
* *Ehrharta erecta*	Panic veldt grass	NI
* *Hordeum murinum*	Wall barley, hare barley	FACU
* *Paspalum dilitatum*	Dallis grass	FAC
* *Stenotaphrum secundatum*	St. Augustine grass	FAC
* *Stipa miliacea*	Smilo grass	NI

VERTEBRATE ANIMALS		
REPTILIA	REPTILES	
IGUANIDAE	IGUANID LIZARDS	
Sceloporus occidentalis	Western fence lizard	
AVES	BIRDS	
COLUMBIDAE	PIGEONS AND DOVES	
Zenaida macroura	Mourning dove	
TROCHILIDAE	HUMMINGBIRDS	
Calypte anna	Anna's hummingbird	

Notes

[1] Wetland Indicator Rating Definitions based on the National Wetland Plant List (USFWS 2012)

- OBL (Obligate Wetland Plants) – Almost always occur in wetlands.
- FACW (Facultative Wetland Plants) – Usually occur in wetlands but may occur in non-wetlands.
- FAC (Facultative Wetland Plants) – Occur in wetlands and non-wetlands.
- FACU (Facultative Upland Plants) – Usually occur in non-wetlands but may occur in wetlands.
- UPL (Upland Plants) – Almost never occur in wetlands.
- NI (Not Included) – Species that are not included in the National Wetland Plant List.

Appendix D

Air Quality/Greenhouse Gas Emissions Calculations

Attachment 1

AQ/GHG Emissions Summary

Air Pollutant Emissions - Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total
Year	lb/day									
2023	4.66	54.52	51.13	0.14	2.94	2.08	5.02	0.72	1.92	2.64
2024	4.19	51.06	48.40	0.15	3.10	1.93	5.02	0.84	1.78	2.62
Maximum	**4.66**	**54.52**	**51.13**	**0.15**	**3.10**	**2.08**	**5.02**	**0.84**	**1.92**	**2.64**

GHG Emissions - Unmitigated Construction

	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	MT/yr					
2023	0.00	390.70	390.70	0.08	0.02	400.01
2024	0.00	181.35	181.35	0.03	0.01	186.34
Total	**0.00**	**572.05**	**572.05**	**0.11**	**0.04**	**586.36**

Attachment 2

AQ/GHG Emissions Input

LAHC Stormwater - Construction, Emissions Estimates

Construction - Equipment Assumptions, input to CalEEMod

Normal working schedule : 5

Target commence construction : 8/10/2023

Assumptions:

Project Description: (internal draft, circa 11/1/2022

- Work occurs 5 days a week, runtimes up to 8 hr/day; overall site + staging ~ 7 acre
- On-road motor vehicle trips are counted as one-way for emissions (except RTs where noted). Default trip lengths.
- HDT Mix or HHDT for all vendor, material haul and equipment delivery trucks.
- Per applicant: skip loaders or handtools for debris and cleanup.

Construction Schedule, and On-Road Vehicle Use

	Phase	Seq. (mo)	Duration (months)	Duration (work days)	Phase Start (estd.)	Phase End (estd.)	Peak Workers (daily roundtrips)	Truck Trip Ends (1-way, avg daily)	Total HDT Mix Truck Trips (1-way, phase)		Truck RT/d
0											
1	Site Prep, Grading	0	1	22	8/10/2023	9/9/2023	16	20	433		10
2	Install Channel, Infiltration	1	5	108	9/9/2023	2/8/2024	32	60	6,500		30
3	Cleanup	5	1	22	1/9/2024	2/8/2024	16	60	1,300		30

Total HDT Mix RTs: 4,117

Offroad Equipment Use

		Type	Equipment Type(s)	Rating (hp)	Load Factor	Quantity	Peak Count per Phase	(hp*load*q*8 hrs/d)
0								
1	Site Prep, Grading	Offroad	Skid Steer Loaders	65	0.37	2		385
		Offroad	Crawler Tractor	212	0.43	1		729
		Offroad	Tractor/Loader/Backhoe	97	0.37	2		574
		Offroad	Grader	187	0.41	1		613
		Offroad	Forklift	89	0.20	2		285
							8	
2	Install Channel, Infiltration	Offroad	Crane	231	0.29	1		536
		Offroad	Skid Steer Loaders	65	0.37	2		385
		Offroad	Trencher	78	0.50	2		624
		Offroad	Forklift	89	0.20	2		285
		Offroad	Bore/Drill Rig	49	0.40	1		157
		Offroad	Cement and Mortar Mixers	9	0.56	2		81
		Offroad	Roller	80	0.38	2		486
		Offroad	Excavator	158	0.38	2		961
		Offroad	Tractor/Loader/Backhoe	97	0.37	2		574
							16	
3	Cleanup	Offroad	Skid Steer Loaders	65	0.37	2		385
		Offroad	Forklift	89	0.20	2		285
		Offroad	Trencher	78	0.50	1		312
		Offroad	Roller	80	0.38	2		486
		Offroad	Cement and Mortar Mixers	9	0.56	2		81
							9	

On-Highway Heavy Duty Trucks (Hauling)

	Excav (ft)	L (ft)	W (ft)	Volume (cy)	Grading, Excav (@ 10 cy/truck)	Import, Export (@ 10 cy/truck)
Concrete-Lined Flood Channel (grading cut+fill)	5	750	35	4,861	486	
Underground Infiltration (excavate)	(per Proj Description 11/1/2022)			15,500	1,550	
Underground Infiltration (fill)	(per Proj Description 11/1/2022)			11,195	1,120	
Import of fill	(per Proj Description 11/1/2022)			1,361		136
Export of spoils	(per Proj Description 11/1/2022)			630		63
					3,156	199

Attachment 3

CalEEMod Outputs

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

LAHC Stormwater

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2yr)	350.00	1000sqft	8.03	350,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2024
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - est. schedule

Off-road Equipment - Equipment list

Grading - equipment list

Off-road Equipment - Equipment List

Off-road Equipment - equipment list

Trips and VMT - Equipment List

Vehicle Trips - No Operational

Vehicle Emission Factors - No Operational

Vehicle Emission Factors -

Vehicle Emission Factors -

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products - No Operational

Area Coating - No Operational

Energy Use - No Operational

Water And Wastewater - No Operational

Solid Waste - No Operational

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	175000	0
tblAreaCoating	Area_Nonresidential_Interior	525000	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	230.00	109.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	10.00	23.00
tblConstructionPhase	PhaseEndDate	7/29/2024	2/8/2024
tblConstructionPhase	PhaseEndDate	9/11/2023	9/9/2023
tblConstructionPhase	PhaseEndDate	8/14/2023	2/8/2024
tblConstructionPhase	PhaseStartDate	9/12/2023	9/9/2023
tblConstructionPhase	PhaseStartDate	8/15/2023	8/10/2023
tblConstructionPhase	PhaseStartDate	8/1/2023	1/9/2024
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.39	0.00
tblEnergyUse	NT24E	3.59	0.00
tblEnergyUse	NT24NG	0.59	0.00
tblEnergyUse	T24E	2.71	0.00
tblEnergyUse	T24NG	26.23	0.00
tblGrading	AcresOfGrading	22.00	10.00
tblGrading	MaterialExported	0.00	630.00

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblGrading	MaterialImported	0.00	1,361.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	455.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,300.00
tblTripsAndVMT	HaulingTripNumber	249.00	433.00
tblTripsAndVMT	HaulingTripNumber	0.00	6,500.00
tblTripsAndVMT	VendorTripNumber	57.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	31.00
tblTripsAndVMT	WorkerTripNumber	20.00	31.00
tblTripsAndVMT	WorkerTripNumber	147.00	64.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	20.25	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	17,167,161.38	0.00
tblWater	OutdoorWaterUseRate	26,851,201.13	0.00

2.0 Emissions Summary

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.6611	54.5156	51.1276	0.1395	2.9425	2.0820	5.0245	0.7159	1.9201	2.6360	0.0000	14,116.1365	14,116.1365	2.9065	0.8337	14,437.2505
2024	4.1944	51.0605	48.4041	0.1453	3.0951	1.9286	5.0237	0.8391	1.7825	2.6215	0.0000	14,916.1582	14,916.1582	2.5506	1.1921	15,335.1696
Maximum	**4.6611**	**54.5156**	**51.1276**	**0.1453**	**3.0951**	**2.0820**	**5.0245**	**0.8391**	**1.9201**	**2.6360**	**0.0000**	**14,916.1582**	**14,916.1582**	**2.9065**	**1.1921**	**15,335.1696**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.6611	54.5156	51.1276	0.1395	2.9425	2.0820	5.0245	0.7159	1.9201	2.6360	0.0000	14,116.1365	14,116.1365	2.9065	0.8337	14,437.2505
2024	4.1944	51.0605	48.4041	0.1453	3.0951	1.9286	5.0237	0.8391	1.7825	2.6215	0.0000	14,916.1582	14,916.1582	2.5506	1.1921	15,335.1696
Maximum	**4.6611**	**54.5156**	**51.1276**	**0.1453**	**3.0951**	**2.0820**	**5.0245**	**0.8391**	**1.9201**	**2.6360**	**0.0000**	**14,916.1582**	**14,916.1582**	**2.9065**	**1.1921**	**15,335.1696**

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.2900e-003	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0766	0.0766	2.0000e-004		0.0816
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2900e-003**	**3.2000e-004**	**0.0357**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**1.3000e-004**		**0.0766**	**0.0766**	**2.0000e-004**	**0.0000**	**0.0816**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.2900e-003	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0766	0.0766	2.0000e-004		0.0816
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.2900e-003**	**3.2000e-004**	**0.0357**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**1.3000e-004**		**0.0766**	**0.0766**	**2.0000e-004**	**0.0000**	**0.0816**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Cleanup	Site Preparation	1/9/2024	2/8/2024	5	23	
2	Grading	Grading	8/10/2023	9/9/2023	5	22	
3	Installation	Building Construction	9/9/2023	2/8/2024	5	109	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Cleanup	Trenchers	1	8.00	78	0.50
Cleanup	Forklifts	2	8.00	89	0.20
Installation	Cranes	1	8.00	231	0.29
Cleanup	Rollers	2	8.00	80	0.38
Grading	Skid Steer Loaders	2	8.00	65	0.37
Installation	Forklifts	2	8.00	89	0.20
Grading	Graders	1	8.00	187	0.41
Cleanup	Cement and Mortar Mixers	2	8.00	9	0.56

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Crawler Tractors	1	8.00	212	0.43
Installation	Skid Steer Loaders	2	8.00	65	0.37
Installation	Trenchers	2	8.00	78	0.50
Grading	Rough Terrain Forklifts	2	8.00	100	0.40
Cleanup	Skid Steer Loaders	2	8.00	65	0.37
Installation	Bore/Drill Rigs	1	8.00	221	0.50
Installation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Installation	Cement and Mortar Mixers	2	8.00	9	0.56
Installation	Rollers	2	8.00	80	0.38
Installation	Excavators	2	8.00	158	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Cleanup	9	31.00	0.00	1,300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	31.00	0.00	433.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Installation	16	64.00	0.00	6,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Cleanup - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0604	10.3438	11.9230	0.0172		0.5631	0.5631		0.5203	0.5203		1,628.7496	1,628.7496	0.5046		1,641.3642
Total	**1.0604**	**10.3438**	**11.9230**	**0.0172**	**0.0000**	**0.5631**	**0.5631**	**0.0000**	**0.5203**	**0.5203**		**1,628.7496**	**1,628.7496**	**0.5046**		**1,641.3642**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1139	7.7208	2.0302	0.0326	0.9894	0.0470	1.0364	0.2713	0.0450	0.3163		3,584.8149	3,584.8149	0.2016	0.5695	3,759.5628
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0996	0.0682	0.9578	2.8200e-003	0.3465	2.0000e-003	0.3485	0.0919	1.8400e-003	0.0937		285.3828	285.3828	7.1800e-003	7.1000e-003	287.6793
Total	**0.2135**	**7.7890**	**2.9879**	**0.0354**	**1.3359**	**0.0490**	**1.3849**	**0.3632**	**0.0468**	**0.4100**		**3,870.1976**	**3,870.1976**	**0.2088**	**0.5766**	**4,047.2421**

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Cleanup - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0604	10.3438	11.9230	0.0172		0.5631	0.5631		0.5203	0.5203	0.0000	1,628.7496	1,628.7496	0.5046		1,641.3642
Total	**1.0604**	**10.3438**	**11.9230**	**0.0172**	**0.0000**	**0.5631**	**0.5631**	**0.0000**	**0.5203**	**0.5203**	**0.0000**	**1,628.7496**	**1,628.7496**	**0.5046**		**1,641.3642**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1139	7.7208	2.0302	0.0326	0.9894	0.0470	1.0364	0.2713	0.0450	0.3163		3,584.8149	3,584.8149	0.2016	0.5695	3,759.5628
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0996	0.0682	0.9578	2.8200e-003	0.3465	2.0000e-003	0.3485	0.0919	1.8400e-003	0.0937		285.3828	285.3828	7.1800e-003	7.1000e-003	287.6793
Total	**0.2135**	**7.7890**	**2.9879**	**0.0354**	**1.3359**	**0.0490**	**1.3849**	**0.3632**	**0.0468**	**0.4100**		**3,870.1976**	**3,870.1976**	**0.2088**	**0.5766**	**4,047.2421**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4923	0.0000	0.4923	0.0536	0.0000	0.0536			0.0000			0.0000
Off-Road	1.4713	17.3698	15.7497	0.0317		0.6492	0.6492		0.5972	0.5972		3,070.4556	3,070.4556	0.9931		3,095.2818
Total	**1.4713**	**17.3698**	**15.7497**	**0.0317**	**0.4923**	**0.6492**	**1.1415**	**0.0536**	**0.5972**	**0.6508**		**3,070.4556**	**3,070.4556**	**0.9931**		**3,095.2818**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0399	2.6815	0.6949	0.0115	0.3445	0.0162	0.3608	0.0945	0.0155	0.1100		1,266.2052	1,266.2052	0.0696	0.2011	1,327.8651
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1066	0.0764	1.0298	2.9100e-003	0.3465	2.0800e-003	0.3486	0.0919	1.9200e-003	0.0938		293.6796	293.6796	7.9200e-003	7.6400e-003	296.1551
Total	**0.1465**	**2.7579**	**1.7247**	**0.0144**	**0.6910**	**0.0183**	**0.7094**	**0.1864**	**0.0175**	**0.2038**		**1,559.8848**	**1,559.8848**	**0.0775**	**0.2087**	**1,624.0202**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4923	0.0000	0.4923	0.0536	0.0000	0.0536			0.0000			0.0000
Off-Road	1.4713	17.3698	15.7497	0.0317		0.6492	0.6492		0.5972	0.5972	0.0000	3,070.4556	3,070.4556	0.9931		3,095.2818
Total	**1.4713**	**17.3698**	**15.7497**	**0.0317**	**0.4923**	**0.6492**	**1.1415**	**0.0536**	**0.5972**	**0.6508**	**0.0000**	**3,070.4556**	**3,070.4556**	**0.9931**		**3,095.2818**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0399	2.6815	0.6949	0.0115	0.3445	0.0162	0.3608	0.0945	0.0155	0.1100		1,266.2052	1,266.2052	0.0696	0.2011	1,327.8651
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1066	0.0764	1.0298	2.9100e-003	0.3465	2.0800e-003	0.3486	0.0919	1.9200e-003	0.0938		293.6796	293.6796	7.9200e-003	7.6400e-003	296.1551
Total	**0.1465**	**2.7579**	**1.7247**	**0.0144**	**0.6910**	**0.0183**	**0.7094**	**0.1864**	**0.0175**	**0.2038**		**1,559.8848**	**1,559.8848**	**0.0775**	**0.2087**	**1,624.0202**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7022	26.1057	29.4218	0.0525		1.3610	1.3610		1.2544	1.2544		5,043.0735	5,043.0735	1.6089		5,083.2947
Total	**2.7022**	**26.1057**	**29.4218**	**0.0525**		**1.3610**	**1.3610**		**1.2544**	**1.2544**		**5,043.0735**	**5,043.0735**	**1.6089**		**5,083.2947**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1210	8.1246	2.1055	0.0349	1.0438	0.0492	1.0930	0.2862	0.0471	0.3333		3,836.4163	3,836.4163	0.2108	0.6092	4,023.2369
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2201	0.1577	2.1260	6.0000e-003	0.7154	4.3000e-003	0.7197	0.1897	3.9600e-003	0.1937		606.3063	606.3063	0.0164	0.0158	611.4170
Total	**0.3411**	**8.2823**	**4.2315**	**0.0409**	**1.7592**	**0.0535**	**1.8127**	**0.4759**	**0.0510**	**0.5270**		**4,442.7226**	**4,442.7226**	**0.2271**	**0.6250**	**4,634.6539**

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Installation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7022	26.1057	29.4218	0.0525		1.3610	1.3610		1.2544	1.2544	0.0000	5,043.0735	5,043.0735	1.6089		5,083.2947
Total	**2.7022**	**26.1057**	**29.4218**	**0.0525**		**1.3610**	**1.3610**		**1.2544**	**1.2544**	**0.0000**	**5,043.0735**	**5,043.0735**	**1.6089**		**5,083.2947**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1210	8.1246	2.1055	0.0349	1.0438	0.0492	1.0930	0.2862	0.0471	0.3333		3,836.4163	3,836.4163	0.2108	0.6092	4,023.2369
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2201	0.1577	2.1260	6.0000e-003	0.7154	4.3000e-003	0.7197	0.1897	3.9600e-003	0.1937		606.3063	606.3063	0.0164	0.0158	611.4170
Total	**0.3411**	**8.2823**	**4.2315**	**0.0409**	**1.7592**	**0.0535**	**1.8127**	**0.4759**	**0.0510**	**0.5270**		**4,442.7226**	**4,442.7226**	**0.2271**	**0.6250**	**4,634.6539**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5947	24.6411	29.3739	0.0525		1.2628	1.2628		1.1641	1.1641		5,045.8895	5,045.8895	1.6098		5,086.1334
Total	**2.5947**	**24.6411**	**29.3739**	**0.0525**		**1.2628**	**1.2628**		**1.1641**	**1.1641**		**5,045.8895**	**5,045.8895**	**1.6098**		**5,086.1334**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1201	8.1458	2.1419	0.0344	1.0439	0.0496	1.0935	0.2862	0.0475	0.3337		3,782.1441	3,782.1441	0.2127	0.6008	3,966.5112
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2057	0.1407	1.9773	5.8300e-003	0.7154	4.1200e-003	0.7195	0.1897	3.7900e-003	0.1935		589.1773	589.1773	0.0148	0.0147	593.9186
Total	**0.3258**	**8.2866**	**4.1192**	**0.0402**	**1.7592**	**0.0537**	**1.8130**	**0.4759**	**0.0513**	**0.5272**		**4,371.3215**	**4,371.3215**	**0.2275**	**0.6155**	**4,560.4298**

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Installation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5947	24.6411	29.3739	0.0525		1.2628	1.2628		1.1641	1.1641	0.0000	5,045.8895	5,045.8895	1.6098		5,086.1334
Total	**2.5947**	**24.6411**	**29.3739**	**0.0525**		**1.2628**	**1.2628**		**1.1641**	**1.1641**	**0.0000**	**5,045.8895**	**5,045.8895**	**1.6098**		**5,086.1334**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1201	8.1458	2.1419	0.0344	1.0439	0.0496	1.0935	0.2862	0.0475	0.3337		3,782.1441	3,782.1441	0.2127	0.6008	3,966.5112
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2057	0.1407	1.9773	5.8300e-003	0.7154	4.1200e-003	0.7195	0.1897	3.7900e-003	0.1935		589.1773	589.1773	0.0148	0.0147	593.9186
Total	**0.3258**	**8.2866**	**4.1192**	**0.0402**	**1.7592**	**0.0537**	**1.8130**	**0.4759**	**0.0513**	**0.5272**		**4,371.3215**	**4,371.3215**	**0.2275**	**0.6155**	**4,560.4298**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2yr)	0.00	0.00	0.00	6.40	88.60	5.00	92	7	1

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2yr)	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2yr)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2yr)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.2900e-003	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0766	0.0766	2.0000e-004		0.0816
Unmitigated	3.2900e-003	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0766	0.0766	2.0000e-004		0.0816

LAHC Stormwater - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2900e-003	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0766	0.0766	2.0000e-004		0.0816
Total	**3.2900e-003**	**3.2000e-004**	**0.0357**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0766**	**0.0766**	**2.0000e-004**		**0.0816**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.2900e-003	3.2000e-004	0.0357	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0766	0.0766	2.0000e-004		0.0816
Total	**3.2900e-003**	**3.2000e-004**	**0.0357**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0766**	**0.0766**	**2.0000e-004**		**0.0816**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

LAHC Stormwater - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

LAHC Stormwater

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2yr)	350.00	1000sqft	8.03	350,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2024
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - est. schedule

Off-road Equipment - Equipment list

Grading - equipment list

Off-road Equipment - Equipment List

Off-road Equipment - equipment list

Trips and VMT - Equipment List

Vehicle Trips - No Operational

Vehicle Emission Factors - No Operational

Vehicle Emission Factors -

Vehicle Emission Factors -

LAHC Stormwater - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products - No Operational

Area Coating - No Operational

Energy Use - No Operational

Water And Wastewater - No Operational

Solid Waste - No Operational

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	175000	0
tblAreaCoating	Area_Nonresidential_Interior	525000	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	230.00	109.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	10.00	23.00
tblConstructionPhase	PhaseEndDate	7/29/2024	2/8/2024
tblConstructionPhase	PhaseEndDate	9/11/2023	9/9/2023
tblConstructionPhase	PhaseEndDate	8/14/2023	2/8/2024
tblConstructionPhase	PhaseStartDate	9/12/2023	9/9/2023
tblConstructionPhase	PhaseStartDate	8/15/2023	8/10/2023
tblConstructionPhase	PhaseStartDate	8/1/2023	1/9/2024
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.39	0.00
tblEnergyUse	NT24E	3.59	0.00
tblEnergyUse	NT24NG	0.59	0.00
tblEnergyUse	T24E	2.71	0.00
tblEnergyUse	T24NG	26.23	0.00
tblGrading	AcresOfGrading	22.00	10.00
tblGrading	MaterialExported	0.00	630.00

LAHC Stormwater - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblGrading	MaterialImported	0.00	1,361.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	455.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,300.00
tblTripsAndVMT	HaulingTripNumber	249.00	433.00
tblTripsAndVMT	HaulingTripNumber	0.00	6,500.00
tblTripsAndVMT	VendorTripNumber	57.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	31.00
tblTripsAndVMT	WorkerTripNumber	20.00	31.00
tblTripsAndVMT	WorkerTripNumber	147.00	64.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	20.25	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	17,167,161.38	0.00
tblWater	OutdoorWaterUseRate	26,851,201.13	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1390	1.6004	1.5401	4.2500e-003	0.0820	0.0639	0.1459	0.0213	0.0590	0.0803	0.0000	390.7002	390.7002	0.0773	0.0248	400.0111
2024	0.0568	0.6880	0.6577	1.9500e-003	0.0401	0.0261	0.0663	0.0109	0.0241	0.0350	0.0000	181.3499	181.3499	0.0316	0.0141	186.3443
Maximum	**0.1390**	**1.6004**	**1.5401**	**4.2500e-003**	**0.0820**	**0.0639**	**0.1459**	**0.0213**	**0.0590**	**0.0803**	**0.0000**	**390.7002**	**390.7002**	**0.0773**	**0.0248**	**400.0111**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1390	1.6004	1.5401	4.2500e-003	0.0820	0.0639	0.1459	0.0213	0.0590	0.0803	0.0000	390.6999	390.6999	0.0773	0.0248	400.0108
2024	0.0568	0.6880	0.6577	1.9500e-003	0.0401	0.0261	0.0663	0.0109	0.0241	0.0350	0.0000	181.3498	181.3498	0.0316	0.0141	186.3442
Maximum	**0.1390**	**1.6004**	**1.5401**	**4.2500e-003**	**0.0820**	**0.0639**	**0.1459**	**0.0213**	**0.0590**	**0.0803**	**0.0000**	**390.6999**	**390.6999**	**0.0773**	**0.0248**	**400.0108**

LAHC Stormwater - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**8-1-2023**	**10-31-2023**	0.9450	0.9450
2	**11-1-2023**	**1-31-2024**	1.3718	1.3718
3	**2-1-2024**	**4-30-2024**	0.1579	0.1579
		Highest	1.3718	1.3718

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.1000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6900e-003	8.6900e-003	2.0000e-005	0.0000	9.2500e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.1000e-004**	**4.0000e-005**	**4.4600e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6900e-003**	**8.6900e-003**	**2.0000e-005**	**0.0000**	**9.2500e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.1000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6900e-003	8.6900e-003	2.0000e-005	0.0000	9.2500e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.1000e-004**	**4.0000e-005**	**4.4600e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6900e-003**	**8.6900e-003**	**2.0000e-005**	**0.0000**	**9.2500e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Cleanup	Site Preparation	1/9/2024	2/8/2024	5	23	
2	Grading	Grading	8/10/2023	9/9/2023	5	22	
3	Installation	Building Construction	9/9/2023	2/8/2024	5	109	

LAHC Stormwater - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Cleanup	Trenchers	1	8.00	78	0.50
Cleanup	Forklifts	2	8.00	89	0.20
Installation	Cranes	1	8.00	231	0.29
Cleanup	Rollers	2	8.00	80	0.38
Grading	Skid Steer Loaders	2	8.00	65	0.37
Installation	Forklifts	2	8.00	89	0.20
Grading	Graders	1	8.00	187	0.41
Cleanup	Cement and Mortar Mixers	2	8.00	9	0.56
Grading	Crawler Tractors	1	8.00	212	0.43
Installation	Skid Steer Loaders	2	8.00	65	0.37
Installation	Trenchers	2	8.00	78	0.50
Grading	Rough Terrain Forklifts	2	8.00	100	0.40
Cleanup	Skid Steer Loaders	2	8.00	65	0.37
Installation	Bore/Drill Rigs	1	8.00	221	0.50
Installation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Installation	Cement and Mortar Mixers	2	8.00	9	0.56
Installation	Rollers	2	8.00	80	0.38
Installation	Excavators	2	8.00	158	0.38

Trips and VMT

LAHC Stormwater - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Cleanup	9	31.00	0.00	1,300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	31.00	0.00	433.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Installation	16	64.00	0.00	6,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Cleanup - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0122	0.1190	0.1371	2.0000e-004		6.4800e-003	6.4800e-003		5.9800e-003	5.9800e-003	0.0000	16.9921	16.9921	5.2600e-003	0.0000	17.1237
Total	**0.0122**	**0.1190**	**0.1371**	**2.0000e-004**	**0.0000**	**6.4800e-003**	**6.4800e-003**	**0.0000**	**5.9800e-003**	**5.9800e-003**	**0.0000**	**16.9921**	**16.9921**	**5.2600e-003**	**0.0000**	**17.1237**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Cleanup - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3600e-003	0.0896	0.0232	3.7000e-004	0.0112	5.4000e-004	0.0117	3.0700e-003	5.2000e-004	3.5900e-003	0.0000	37.3759	37.3759	2.1100e-003	5.9400e-003	39.1979
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	8.0000e-004	0.0113	3.0000e-005	3.9100e-003	2.0000e-005	3.9300e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.0216	3.0216	7.0000e-005	8.0000e-005	3.0459
Total	**2.4200e-003**	**0.0904**	**0.0345**	**4.0000e-004**	**0.0151**	**5.6000e-004**	**0.0157**	**4.1100e-003**	**5.4000e-004**	**4.6500e-003**	**0.0000**	**40.3975**	**40.3975**	**2.1800e-003**	**6.0200e-003**	**42.2439**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0122	0.1190	0.1371	2.0000e-004		6.4800e-003	6.4800e-003		5.9800e-003	5.9800e-003	0.0000	16.9921	16.9921	5.2600e-003	0.0000	17.1237
Total	**0.0122**	**0.1190**	**0.1371**	**2.0000e-004**	**0.0000**	**6.4800e-003**	**6.4800e-003**	**0.0000**	**5.9800e-003**	**5.9800e-003**	**0.0000**	**16.9921**	**16.9921**	**5.2600e-003**	**0.0000**	**17.1237**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Cleanup - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3600e-003	0.0896	0.0232	3.7000e-004	0.0112	5.4000e-004	0.0117	3.0700e-003	5.2000e-004	3.5900e-003	0.0000	37.3759	37.3759	2.1100e-003	5.9400e-003	39.1979
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	8.0000e-004	0.0113	3.0000e-005	3.9100e-003	2.0000e-005	3.9300e-003	1.0400e-003	2.0000e-005	1.0600e-003	0.0000	3.0216	3.0216	7.0000e-005	8.0000e-005	3.0459
Total	**2.4200e-003**	**0.0904**	**0.0345**	**4.0000e-004**	**0.0151**	**5.6000e-004**	**0.0157**	**4.1100e-003**	**5.4000e-004**	**4.6500e-003**	**0.0000**	**40.3975**	**40.3975**	**2.1800e-003**	**6.0200e-003**	**42.2439**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4200e-003	0.0000	5.4200e-003	5.9000e-004	0.0000	5.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0162	0.1911	0.1733	3.5000e-004		7.1400e-003	7.1400e-003		6.5700e-003	6.5700e-003	0.0000	30.6402	30.6402	9.9100e-003	0.0000	30.8879
Total	**0.0162**	**0.1911**	**0.1733**	**3.5000e-004**	**5.4200e-003**	**7.1400e-003**	**0.0126**	**5.9000e-004**	**6.5700e-003**	**7.1600e-003**	**0.0000**	**30.6402**	**30.6402**	**9.9100e-003**	**0.0000**	**30.8879**

LAHC Stormwater - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6000e-004	0.0298	7.5800e-003	1.3000e-004	3.7200e-003	1.8000e-004	3.9000e-003	1.0200e-003	1.7000e-004	1.1900e-003	0.0000	12.6278	12.6278	7.0000e-004	2.0100e-003	13.2428
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.6000e-004	0.0116	3.0000e-005	3.7400e-003	2.0000e-005	3.7600e-003	9.9000e-004	2.0000e-005	1.0100e-003	0.0000	2.9744	2.9744	8.0000e-005	8.0000e-005	2.9994
Total	**1.5400e-003**	**0.0306**	**0.0192**	**1.6000e-004**	**7.4600e-003**	**2.0000e-004**	**7.6600e-003**	**2.0100e-003**	**1.9000e-004**	**2.2000e-003**	**0.0000**	**15.6021**	**15.6021**	**7.8000e-004**	**2.0900e-003**	**16.2422**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4200e-003	0.0000	5.4200e-003	5.9000e-004	0.0000	5.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0162	0.1911	0.1733	3.5000e-004		7.1400e-003	7.1400e-003		6.5700e-003	6.5700e-003	0.0000	30.6401	30.6401	9.9100e-003	0.0000	30.8879
Total	**0.0162**	**0.1911**	**0.1733**	**3.5000e-004**	**5.4200e-003**	**7.1400e-003**	**0.0126**	**5.9000e-004**	**6.5700e-003**	**7.1600e-003**	**0.0000**	**30.6401**	**30.6401**	**9.9100e-003**	**0.0000**	**30.8879**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6000e-004	0.0298	7.5800e-003	1.3000e-004	3.7200e-003	1.8000e-004	3.9000e-003	1.0200e-003	1.7000e-004	1.1900e-003	0.0000	12.6278	12.6278	7.0000e-004	2.0100e-003	13.2428
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.6000e-004	0.0116	3.0000e-005	3.7400e-003	2.0000e-005	3.7600e-003	9.9000e-004	2.0000e-005	1.0100e-003	0.0000	2.9744	2.9744	8.0000e-005	8.0000e-005	2.9994
Total	**1.5400e-003**	**0.0306**	**0.0192**	**1.6000e-004**	**7.4600e-003**	**2.0000e-004**	**7.6600e-003**	**2.0100e-003**	**1.9000e-004**	**2.2000e-003**	**0.0000**	**15.6021**	**15.6021**	**7.8000e-004**	**2.0900e-003**	**16.2422**

3.4 Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1081	1.0442	1.1769	2.1000e-003		0.0544	0.0544		0.0502	0.0502	0.0000	183.0000	183.0000	0.0584	0.0000	184.4595
Total	**0.1081**	**1.0442**	**1.1769**	**2.1000e-003**		**0.0544**	**0.0544**		**0.0502**	**0.0502**	**0.0000**	**183.0000**	**183.0000**	**0.0584**	**0.0000**	**184.4595**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Installation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0300e-003	0.3280	0.0835	1.4000e-003	0.0410	1.9700e-003	0.0430	0.0113	1.8800e-003	0.0132	0.0000	139.1285	139.1285	7.6600e-003	0.0221	145.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1200e-003	6.4500e-003	0.0872	2.4000e-004	0.0281	1.7000e-004	0.0282	7.4500e-003	1.6000e-004	7.6100e-003	0.0000	22.3294	22.3294	5.9000e-004	5.8000e-004	22.5175
Total	**0.0132**	**0.3345**	**0.1708**	**1.6400e-003**	**0.0691**	**2.1400e-003**	**0.0712**	**0.0187**	**2.0400e-003**	**0.0208**	**0.0000**	**161.4579**	**161.4579**	**8.2500e-003**	**0.0227**	**168.4215**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1081	1.0442	1.1769	2.1000e-003		0.0544	0.0544		0.0502	0.0502	0.0000	182.9998	182.9998	0.0584	0.0000	184.4593
Total	**0.1081**	**1.0442**	**1.1769**	**2.1000e-003**		**0.0544**	**0.0544**		**0.0502**	**0.0502**	**0.0000**	**182.9998**	**182.9998**	**0.0584**	**0.0000**	**184.4593**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Installation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0300e-003	0.3280	0.0835	1.4000e-003	0.0410	1.9700e-003	0.0430	0.0113	1.8800e-003	0.0132	0.0000	139.1285	139.1285	7.6600e-003	0.0221	145.9040
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1200e-003	6.4500e-003	0.0872	2.4000e-004	0.0281	1.7000e-004	0.0282	7.4500e-003	1.6000e-004	7.6100e-003	0.0000	22.3294	22.3294	5.9000e-004	5.8000e-004	22.5175
Total	**0.0132**	**0.3345**	**0.1708**	**1.6400e-003**	**0.0691**	**2.1400e-003**	**0.0712**	**0.0187**	**2.0400e-003**	**0.0208**	**0.0000**	**161.4579**	**161.4579**	**8.2500e-003**	**0.0227**	**168.4215**

3.4 Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0376	0.3573	0.4259	7.6000e-004		0.0183	0.0183		0.0169	0.0169	0.0000	66.3745	66.3745	0.0212	0.0000	66.9039
Total	**0.0376**	**0.3573**	**0.4259**	**7.6000e-004**		**0.0183**	**0.0183**		**0.0169**	**0.0169**	**0.0000**	**66.3745**	**66.3745**	**0.0212**	**0.0000**	**66.9039**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Installation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8100e-003	0.1192	0.0308	5.0000e-004	0.0149	7.2000e-004	0.0156	4.0900e-003	6.9000e-004	4.7700e-003	0.0000	49.7202	49.7202	2.8000e-003	7.9000e-003	52.1440
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7500e-003	2.0900e-003	0.0294	9.0000e-005	0.0102	6.0000e-005	0.0102	2.7000e-003	5.0000e-005	2.7600e-003	0.0000	7.8656	7.8656	1.9000e-004	2.0000e-004	7.9288
Total	**4.5600e-003**	**0.1213**	**0.0602**	**5.9000e-004**	**0.0251**	**7.8000e-004**	**0.0258**	**6.7900e-003**	**7.4000e-004**	**7.5300e-003**	**0.0000**	**57.5857**	**57.5857**	**2.9900e-003**	**8.1000e-003**	**60.0728**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0376	0.3573	0.4259	7.6000e-004		0.0183	0.0183		0.0169	0.0169	0.0000	66.3745	66.3745	0.0212	0.0000	66.9038
Total	**0.0376**	**0.3573**	**0.4259**	**7.6000e-004**		**0.0183**	**0.0183**		**0.0169**	**0.0169**	**0.0000**	**66.3745**	**66.3745**	**0.0212**	**0.0000**	**66.9038**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Installation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8100e-003	0.1192	0.0308	5.0000e-004	0.0149	7.2000e-004	0.0156	4.0900e-003	6.9000e-004	4.7700e-003	0.0000	49.7202	49.7202	2.8000e-003	7.9000e-003	52.1440
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7500e-003	2.0900e-003	0.0294	9.0000e-005	0.0102	6.0000e-005	0.0102	2.7000e-003	5.0000e-005	2.7600e-003	0.0000	7.8656	7.8656	1.9000e-004	2.0000e-004	7.9288
Total	**4.5600e-003**	**0.1213**	**0.0602**	**5.9000e-004**	**0.0251**	**7.8000e-004**	**0.0258**	**6.7900e-003**	**7.4000e-004**	**7.5300e-003**	**0.0000**	**57.5857**	**57.5857**	**2.9900e-003**	**8.1000e-003**	**60.0728**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2yr)	0.00	0.00	0.00	6.40	88.60	5.00	92	7	1

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2yr)	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2yr)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2yr)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2yr)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2yr)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

LAHC Stormwater - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.1000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6900e-003	8.6900e-003	2.0000e-005	0.0000	9.2500e-003
Unmitigated	4.1000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6900e-003	8.6900e-003	2.0000e-005	0.0000	9.2500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6900e-003	8.6900e-003	2.0000e-005	0.0000	9.2500e-003
Total	**4.1000e-004**	**4.0000e-005**	**4.4600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6900e-003**	**8.6900e-003**	**2.0000e-005**	**0.0000**	**9.2500e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.1000e-004	4.0000e-005	4.4600e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.6900e-003	8.6900e-003	2.0000e-005	0.0000	9.2500e-003
Total	**4.1000e-004**	**4.0000e-005**	**4.4600e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**8.6900e-003**	**8.6900e-003**	**2.0000e-005**	**0.0000**	**9.2500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2yr)	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2yr)	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2yr)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2yr)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation