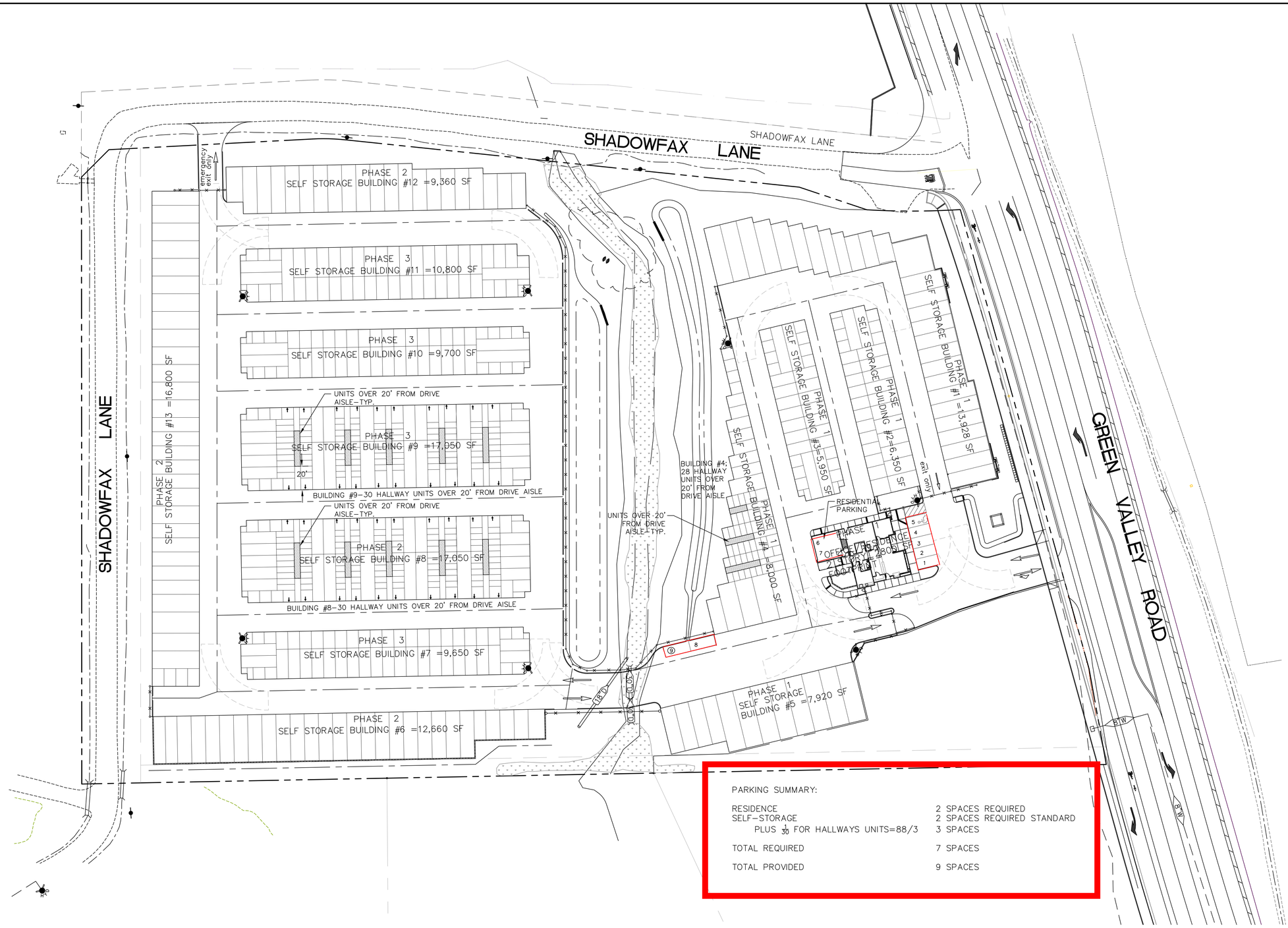

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)

1 inch = 40 ft.

SELF-STORAGE BUILDING SUMMARY:

OFFICE	=	2,800 SF (1st FLOOR)
SS #1	=	13,928 SF
SS #2	=	6,350 SF
SS #3	=	5,950 SF
SS #4	=	8,000 SF
SS #5	=	7,920 SF
SS #6	=	12,660 SF
SS #7	=	9,650 SF
SS #8	=	17,050 SF
SS #9	=	17,050 SF
SS #10	=	9,700 SF
SS #11	=	10,800 SF
SS #12	=	9,360 SF
SS #13	=	16,800 SF
TOTAL	=	148,000 SF

SITE SUMMARY:

BUILDING COVERAGE	=149,000 SF (36%)
TOTAL CONCRETE DRIVES	=117,000 SF (28%)
SHADOWFAX LANE (SOUTH END)	=26,700 SF (6.5%)
OPEN SPACE/LANDCAPE	=93,520 SF (22.5%)
FUTURE AREA	= 30,000 SF (7%)
TOTAL SITE 9.55 ACRES	= 416,548 SF (100%)

PHASING PLAN:

PHASE 1:	OFFICE	2,800 SF
	BUILDING #1	13,928 SF
	BUILDING #2	6,350 SF
	BUILDING #3	5,950 SF
	BUILDING #4	8,000 SF
	BUILDING #5	7,920 SF
	PHASE 1	44,948 SF
PHASE 2:	BUILDING #6	12,660 SF
	BUILDING #8	17,050 SF
	BUILDING #12	9,360 SF
	BUILDING #13	16,800 SF
	PHASE 2	55,870 SF
PHASE 3:	BUILDING #7	9,650 SF
	BUILDING #9	17,050 SF
	BUILDIGN #10	9,700 SF
	BUILDING #11	10,800 sf
	PHASE 3	47,200 SF
	TOTAL	148,000 SF

PARKING SUMMARY:

RESIDENCE	2 SPACES REQUIRED
SELF-STORAGE	2 SPACES REQUIRED STANDARD
PLUS $\frac{1}{30}$ FOR HALLWAYS UNITS=88/3	3 SPACES
TOTAL REQUIRED	7 SPACES
TOTAL PROVIDED	9 SPACES

PLOTTED 5-23-19

Exhibit O-Parking Calculation

REVISIONS

DATE	DESCRIPTION	BY

MICHAEL J. HILL No. 49970 Exp. 03-31-19 CIVIL STATE OF CALIFORNIA REGISTERED PROFESSIONAL ENGINEER

GENESIS ENGINEERING
1402 D Street Marysville, CA 95901
office (530) 742-1300 - fax (530) 742-1331
email sean@genesisengineering.us

EDH-FOLSOM SELF STORAGE
PARKING & PHASING PLAN

COUNTY OF EL DORADO
SE CORNER OF SHADOW FAX & GREEN VALLEY RD.
APN #124-301-03

DESIGN BY:
DRAWN BY:
CHECKED BY: S.M.O.
AGENCY CHECK BY:

SHEET PH-1 OF 1

Biological Resources Evaluation
for the
Shadowfax Self Storage Project

El Dorado County, CA

2018 DEC 20 PM 1:56
RECEIVED
PLANNING DEPARTMENT

Prepared by:

Sycamore Environmental Consultants, Inc.
6355 Riverside Blvd., Suite C
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Phone: 916/ 427-0703
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Prepared for:

Eastlake Capital, LLC
1681 Corsica Drive
Yuba City, CA 95993
Phone: 530/ 682-3531
Contact: Mr. Jatinder "Jin" Mann

October 2018

Exhibit P-Biological Resources Evaluation

Biological Resources Evaluation
for the
Shadowfax Self Storage Project

El Dorado County, CA

Table of Contents

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Appendices

I. SUMMARY OF FINDINGS AND CONCLUSIONS

This biological resources evaluation was prepared for the Shadowfax Self Storage Project in El Dorado County, CA, to identify baseline biological resources within the biological study area (BSA). The Project proposes the construction of new storage facility.

The approximately 9.55-acre BSA provides potential habitat for special-status wildlife and plant species. The BSA is within the wintering range of burrowing owl (*Athene cunicularia*), but outside of the breeding range. Grasshopper sparrow (*Ammodramus savannarum*), bald eagle (*Haliaeetus leucocephalus*), and white-tailed kite (*Elanus leucurus*) have the potential to nest in or near the BSA. One 65-inch dbh Valley oak (*Quercus lobata*) occurs in the BSA adjacent to a wetland swale. The valley oak tree may contain roosting cavities for the pallid bat (*Antrozous pallidus*). The BSA provides potential habitat for special-status plants big-scale balsamroot (*Balsamorhiza macrolepis*) and Tuolumne button-celery (*Eryngium pinnatisectum*). Big-scale balsamroot and Tuolumne button-celery were not observed in the BSA during the biological survey conducted during the evident and identifiable period of these species.

Oak woodlands within the BSA are regulated by El Dorado County under the Oak Resources Management Plan (ORMP), adopted October 2017. The one Valley oak tree within the BSA qualifies as a heritage tree under the ORMP. Project site plans, dated 20 April 2018, shows the heritage tree in an open space buffer along the wetland swale.

A wetland swale transects the BSA from east to west. The wetland swale is regulated as a waters of the U.S. under the federal Clean Water Act (CWA), and under the State Fish and Game Code §1600 Streambed Alteration Program. County Zoning Code §130.30.030(G) establishes standards for avoidance and minimization of impacts to wetlands.

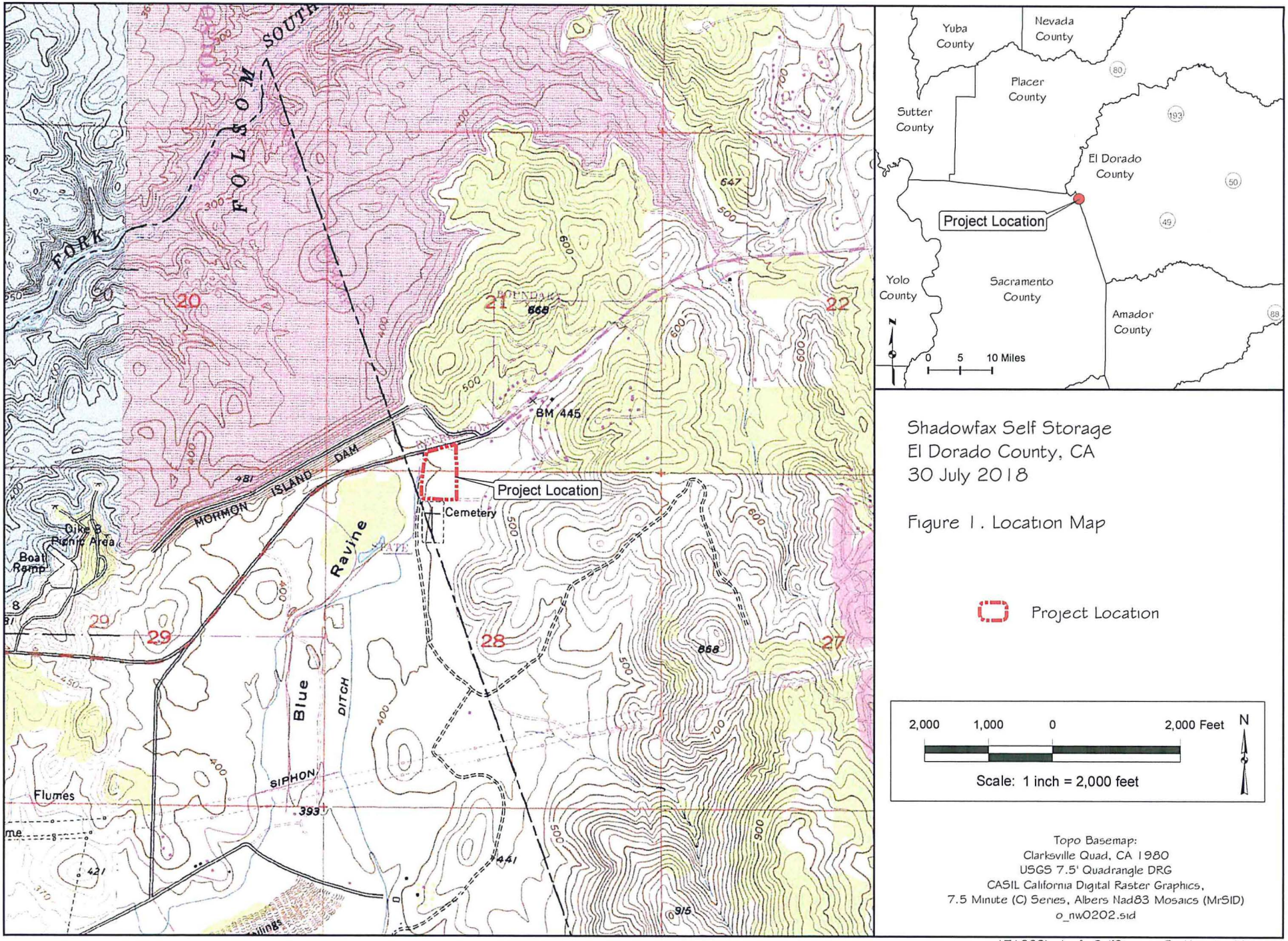
II. INTRODUCTION

A. Purpose of Report

The purpose of this report is to document baseline biological resources within the BSA. This report may be used in support of permit applications and in the California Environmental Quality Act (CEQA) review process. Project Design has not been finalized, and this Biological Resources Evaluation (BRE) is not intended to identify project impacts or propose mitigation measures.

B. Project Location

The approximately 9.55-acre BSA is located on the southeast corner of the intersection of Green Valley Road and Shadowfax Lane, in western El Dorado County. The BSA is on the Clarksville U.S. Geological Survey topographic quad (Section 21 and 28 [T10N, R8E]; Figure 1), and is in the Lower American hydrologic unit (hydrologic unit code 18020111). Its centroid is 38.699702° north, 121.108627° west, UTM coordinates 664,473 meters E, 4,285,150 meters N, Zone 10S (WGS84). Figure 2 is an aerial photograph of the BSA.



171128ShadowfaxSelfStorage_Fig1LocationMap.mxd

Shadowfax Self Storage
El Dorado County, CA
3 October 2018

800 400 0 800 Feet

N

Scale: 1 inch = 800 feet

Biological Study Area (BSA)

Figure 2. Aerial Photograph

Aerial Photograph: 6 August 2017
UC-G Imagery, US-CA-Sacramento, Microsoft
ESRI ArcGIS Basemap Layer

17128ShadowfaxSelfStorage_Fig2AerialPhotograph.mxd

The BSA is located in El Dorado County Rare Plant Mitigation Area 2. The BSA is outside the U.S. Fish and Wildlife Service (USFWS) recovery boundary for the Pine Hill plants (USFWS August 2002). The BSA is located outside the El Dorado County Important Biological Corridor (IBC) and Ecological Preserve (EP) overlay areas (El Dorado County 2004b).

C. Project Owner, Applicant and Engineer

Owner	Applicant	Engineer
Barbara Orosco	Matt Yzuel	Sean O'Neill
1000 Orosco Drive	Granite Realty Group	Genesis Engineering
El Dorado Hills, CA	4120 Douglas Blvd.	1402 D Street
95762	Granite Bay, CA 95746	Marysville, CA95901
	Phone: 916.878.6948	(530) 742-1300
	DRE# 01744502	

D. Project Description

The Project is the proposed development of a new self-storage facility on Green Valley Road. Project design has not been finalized, and this report does not quantify impacts or propose mitigation.

III. STUDY METHODS

A. Studies Conducted

An evaluation of biological resources was conducted to determine whether any special-status plant or wildlife species, their habitat, or sensitive habitats occur within the BSA. Data on known special-status species and habitats within the area was obtained from state and federal agencies. Maps and aerial photographs of the BSA and surrounding area were reviewed. A field survey was conducted to determine what habitat types were present. The field survey, map review, and a review of the life history of evaluated species and habitats were used to determine the special-status species and sensitive habitats that have the potential to occur within the BSA.

Special-status species in this report are those listed under the federal (FESA) or state (CESA) endangered species acts, under the California Native Plant Protection Act, as a California species of special concern or fully protected by the California Department of Fish and Wildlife (CDFW), or that are on List 1 or 2 of the California Native Plant Society's Inventory of Rare and Endangered Plants of California (CNPS 2018). Special-status natural communities are waters, wetlands, riparian communities, and any natural community ranked S1, S2, or S3 by CDFW (2018).

B. Literature Search

Sycamore Environmental obtained a list through the U.S. Fish and Wildlife Service (USFWS) Sacramento Field Office (20 July 2018) that identifies federally listed species that have the potential to occur in or be impacted by a project within the BSA (Appendix A).

The California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) Inventory were queried for the Clarksville quad and eight surrounding USGS quads (20 July 2018) in order to acquire known records of special-status species that occur in the vicinity of the BSA (Appendix A). The CNDDB tracks some species that have not been designated by CDFW as a California species of special concern and do not otherwise meet the criteria for special-status species in this BRE; these species were not evaluated as special-status species.

C. Survey Dates and Personnel

Fieldwork was conducted by Juan Mejia, Biologist, on 18 July 2018.

D. Field Survey Methods

The biological survey consisted of walking through the BSA to assess potential habitat for special-status species and sensitive communities. Plant and animal species and vegetative communities were identified and recorded. A list of plant and wildlife species observed in the BSA can be located in Appendix C. Photographs of the BSA are located in Appendix D.

The U.S. Army Corps of Engineers provided a preliminary jurisdictional determination for the boundaries of waters of the U.S. within the BSA on 12 December 2013. The Corps determined that 0.27 acre of jurisdictional wetlands (wetland swale) occurred in the BSA. The 2018 biological survey included an evaluation of the wetland swale in its current condition.

E. Problems Encountered and Limitations That May Influence Results

The surveys conducted for this BRE are not intended to meet the documentation requirements of a formal jurisdictional delineation of waters of the U.S, or any published agency protocol or guideline surveys for special-status species. No other problems or limitations were encountered during the fieldwork that would influence the results.

F. Mapping

An aerial photograph acquired from Google Earth Pro (2018) provided the base layer for Figure 4. Waters and wetland boundaries were mapped with a sub-meter accurate global positioning system (GPS). The aerial photograph and field notes were used to estimate the boundaries of upland biological communities. Acreages were calculated using ArcMap functions.

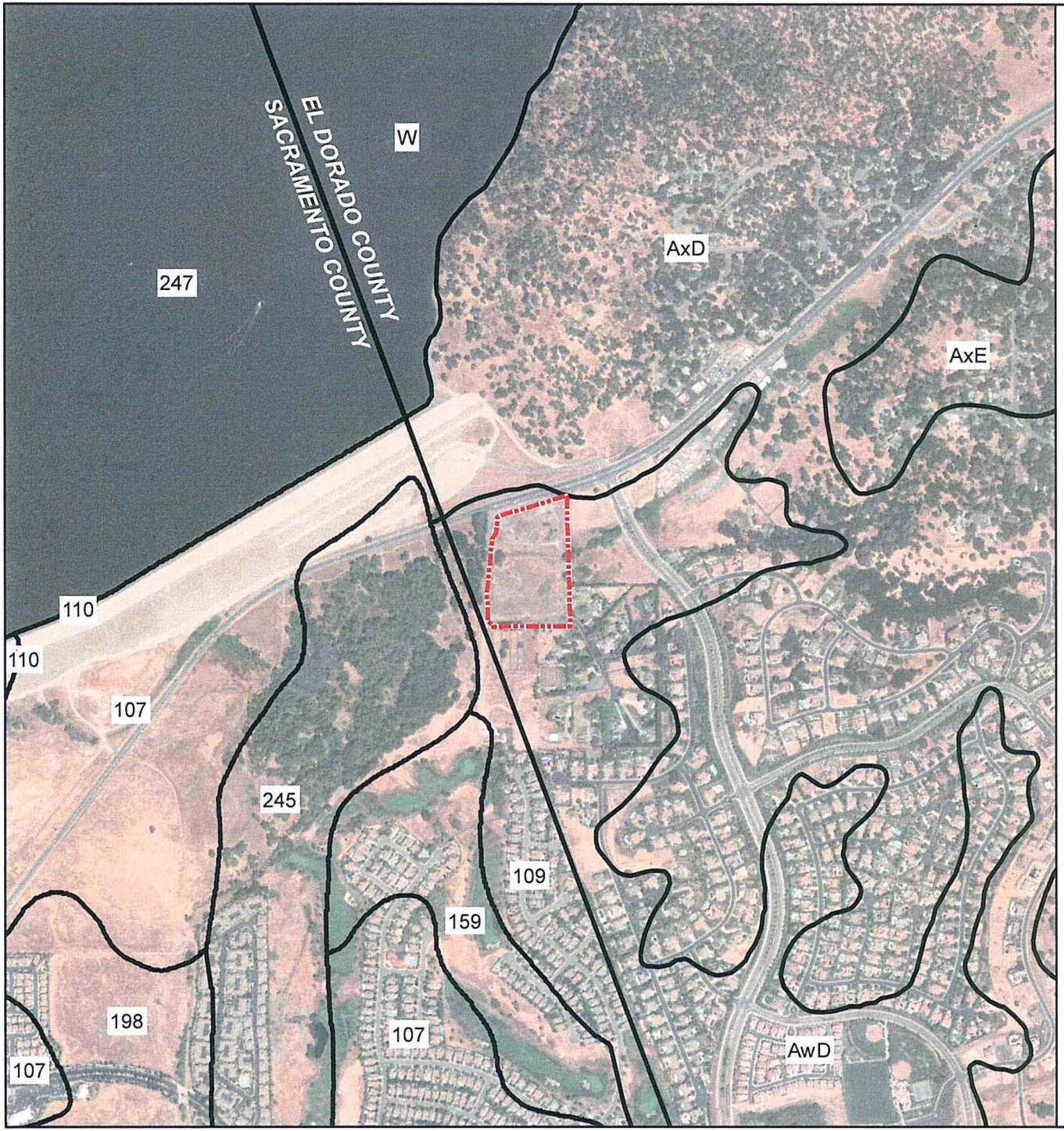
IV. ENVIRONMENTAL SETTING

The BSA is located in the lower foothills of the western slope of the Sierra Nevada Mountains. The elevation ranges from approximately 390 to 420 feet. The BSA is mostly undeveloped non-native annual grassland with a few scattered trees. There are three small wood sheds in the BSA and a drainage that bisects the BSA from east to west. The area to the east of the BSA is undeveloped land. The areas south and southeast of the BSA consist of residential use and a cemetery. The Sacramento County boundary and the Mormon Island Wetland Preserve are further west of Shadowfax Lane, but within a few hundred feet of the parcel. North of the BSA is Folsom Lake recreational area.

A. Soils

Soil mapping units in the BSA (Figure 3) are summarized below (NRCS 1974, USDA-NRCS 2018). Reported colors are for moist soil. The mapping units in the BSA are not categorized as hydric by the USDA (2018).

Auburn silt loam, 2 to 30% slopes: The Auburn series consists of well-drained soils underlain by hard metamorphic rocks at a depth of 12 to 26 inches. A typical profile of Auburn very rocky silt loam, 2 to 30% slopes has dark reddish brown (5YR 3/3) slightly acidic silt loam from 0 to 3 inches, dark reddish brown (5YR 3/4) slightly acidic silt loam from 3 to 14 inches, and weathered metabasic rock below 14 inches. In Auburn silt loam, less than 5% of the surface is exposed bedrock. Permeability is moderate, and surface runoff and erosion hazard increase with slope.



Shadowfax Self Storage
El Dorado County, CA
3 October 2018

Figure 3. Soils Map

Biological Study Area (BSA)

Soil Boundary

Soil Mapping Unit

Symbol	Name
AwD	Auburn silt loam, 2 to 30 percent slopes

1,000 500 0 1,000 Feet

N

Scale: 1 inch = 1000 feet

SYCAMORE Environmental Consultants, Inc.

Soil Survey Geographic (SSURGO) database for El Dorado Area, California, USDA, NRCS and Sacramento County, California, USDA, NRCS
URL:http://SoilDataMart.nrcs.usda.gov/

Aerial Photograph: 6 August 2017
NAIP2016 USDA FSA Imagery
ESRI ArcGIS Basemap Layer

17128ShadowfaxSelfStorage_Fig3SoilsMap.mxd

B. Biological Communities

Biological communities are defined by species composition and relative abundance. The biological communities described below correlate, where applicable, with the list of California terrestrial natural communities recognized by the CNDDB (CDFW 2018) and the El Dorado County General Plan EIR (2004a). The communities were identified based on Sawyer et al. (2009). Biological communities are mapped on Figure 4 and listed in Table 1. Photographs of the BSA are located in Appendix D.

Table 1. Biological Communities

Biological Community Common Name (Scientific Name [CDFW Code][1])	**El Dorado County Major Habitat Type** [2]	**Area (ac)**
Nonnative Annual Grassland (*Avena barbata – Bromus hordeaceus* semi-natural herbaceous stands [44.150.03])	Annual Grassland	9.03
Wetland Swale	--	0.27
Developed – Structures and Roads	--	0.25
	Total:	**9.55**

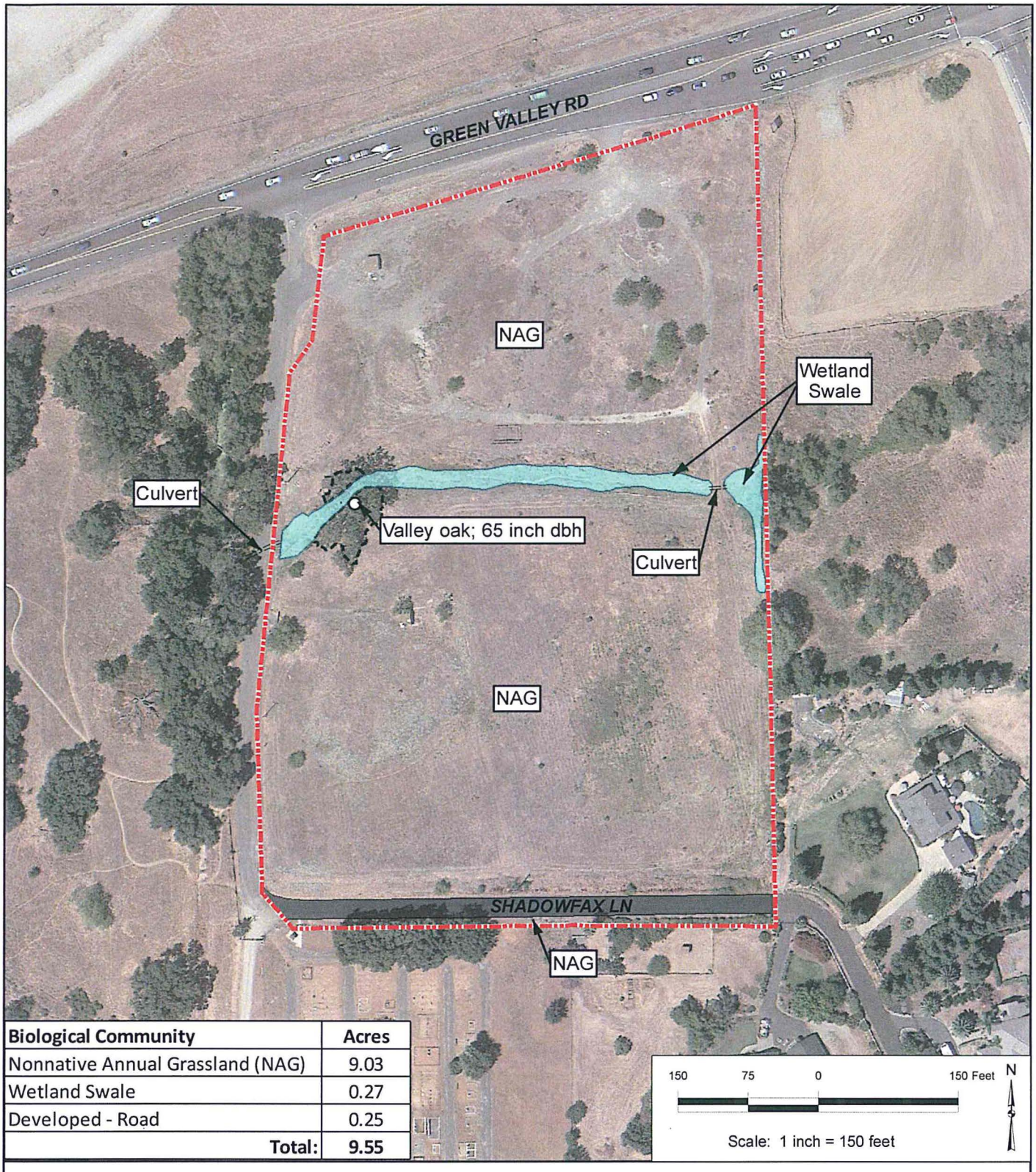
[1] Sawyer et al. 2009, CDFW 2018
[2]El Dorado County 2004a

1. Nonnative Annual Grassland

Nonnative annual grassland is an upland herbaceous community dominated by nonnative grasses and nonnative forbs. In the BSA, only a few widely spaced trees occur within the grassland. Some native coyote brush shrubs (*Baccharis pilularis*) are scattered in the southeastern portion of the BSA. Common species include bromes (*Bromus* sp.), wild oat (*Avena* sp.), clovers (*Trifolium* sp.), and stinkwort (*Dittrichia graveolens*). Nonnative annual grassland is a community dominated by nonnatives and does not have a State rarity ranking (CDFW 2018).

2. Wetland Swale

The wetland swale occurs in the central portion of the BSA. The Corps verified 0.27 acre of wetland swale in 2013. The wetland swale extends from the western to eastern BSA boundary. One large Valley oak (*Quercus lobata*) occurs adjacent to the wetland swale on the west side of the BSA. Species observed in the wetland swale include iris-leaved rush (*Juncus xiphioides*), narrow-leaved cattail (*Typha angustifolia*), nutsedge (*Cyperus* sp.), spikerush (*Eleocharis macrostachya*), hyssop-leaved loosestrife (*Lythrum hyssopifolium*), and water cress (*Nasturtium officinale*).



Biological Community	Acres
Nonnative Annual Grassland (NAG)	9.03
Wetland Swale	0.27
Developed - Road	0.25
Total:	**9.55**

150 75 0 150 Feet

Scale: 1 inch = 150 feet

N

Shadowfax Self Storage
El Dorado County, CA
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Biological Study Area (BSA; 9.55 ac)

Wetland Swale (verified 2013)

Developed - Roads

Existing Culvert

SYCAMORE Environmental Consultants, Inc.

Aerial Photograph: 6 August 2017
UC-G Imagery, US-CA-Sacramento, Microsoft ESRI ArcGIS Basemap Layer

Figure 4.
Biological Resource Map

171285ShadowfaxSelfStorage_Fig4BioRes_v2.mxd

3. Developed Structures and Roads

This area includes Shadowfax Lane on the south perimeter of the BSA. This area occupies 0.25 acre.

C. The Existing Level of Disturbance

The majority of the BSA is disturbed upland habitat. Strawberry production occurred south of the wetland swale from 2005 through 2014. The area northwest of the wetland swale, around the shed, was previously designated as a parking area. From 2011 until 2014, a nursery operated north of the wetland swale. The BSA has been unused since 2014. The sheds contain evidence of homeless occupation. Old irrigation pipes occur in various locations south of the wetland swale. Several horticultural trees planted by the previous nursery occur north of the swale. Annual grasses and forbs were mowed in 2018, prior to the survey.

V. BIOLOGICAL RESOURCES IN THE STUDY AREA

A. Determination of Special-Status Species in the Study Area

USFWS file data and CNDDB/CNPS records were used to determine which special-status species have the potential to occur within the BSA (Appendix A). A field survey was conducted to determine if habitat for special-status species identified in the file data is present in the BSA. Special-status species for which suitable habitat is present in the BSA are listed in Table 2.

Table 2. Special-Status Species and Natural Communities

Special-Status Species	Common Name	Federal Status [a]	State Status [a] & other codes [b]	Source [c]	Habitat Present? / Species Observed?
Birds					
Nesting Birds (MBTA or CDFW regulated)		--	--	3	Yes/No
Ammodramus savannarum	Grasshopper sparrow	--	SSC	2	Yes/No
Aquila chrysaetos	Golden eagle	--	FP	2	Yes/No
Athene cunicularia	Burrowing owl	--	SSC	2	Yes/No
Haliaeetus leucocephalus	Bald eagle	--	FP	2	Yes/No
Elanus leucurus	White-tailed kite	--	FP	2	Yes/No
Mammals					
Antrozous pallidus	Pallid bat	--	SSC	2	Yes/No
Taxidea taxus	American badger	--	SSC	2	Yes/No
Plants			**/ CNPS List [b]**		
Balsamorhiza macrolepis var. *macrolepis*	Big-scale balsamroot	--	--/ 1B.2	2	Yes/No
Eryngium pinnatisectum	Tuolumne button-celery	--	--/ 1B.2	2	Yes/No
Natural Communities					
Wetland Swale		--	--	3	Yes/Yes

[a] **Listing Status** Federal status determined from USFWS letter. State status determined from CDFW (2018a). Codes used in table are: **E** = Endangered; **T** = Threatened; **P** = Proposed; **C** = Candidate; **R** = California Rare; * = Possibly extinct.

[b] **Other Codes** Other codes determined from USFWS letter; CDFW (2018a). Codes used in table are as follows:

SSC = CDFW Species of Special Concern; **FP** = CDFW Fully Protected; **Prot** = CDFW Protected; **CH** = Critical habitat designated.
CNPS List (plants only): **1A** = Presumed Extinct in CA; **1B** = Rare or Endangered (R/E) in CA and elsewhere; **2** = R/E in CA and more common elsewhere; **3** = Need more information; **4** = Plants of limited distribution
CNPS List Decimal Extensions:.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); **.2** = Fairly endangered in CA (20-80% of occurrences threatened); **.3** = Not very endangered in CA (< 20% of occurrences threatened or no current threats known).

[c]**Source:1** = USFWS letter. **2** =CNDDB. **3** = Observed or included by Sycamore Environmental.

B. Special-Status Species not in the Project Study Area

Special-status species for which suitable habitat is not present, or whose distributional limits preclude the possibility of their occurrence in the BSA, are not discussed in Section V of this report. An evaluation of these species can be located in Appendix B.

C. Evaluation of Special-Status Wildlife Species

1. Birds

Nesting Birds Listed Under the MBTA or Regulated by CA Fish and Game Code

California Fish and Game Code §3503 protects most birds and their nests. CA Fish and Game Code §3503.5 further protects all birds in the orders Falconiformes and Strigiformes (collectively known as birds of prey). Birds of prey include raptors, falcons, and owls. The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) also protects most birds and their nests. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any bird listed in 50 CFR Part 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations. Any disturbance that causes direct injury, death, nest abandonment, or forced fledging of migratory birds, is restricted under the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a 'take' of the species under federal law.

HABITAT PRESENT IN THE BSA: The BSA provides potential nesting habitat for birds listed under the MBTA or regulated by California Fish and Game Code.

DISCUSSION: Depending on the species, birds may nest on trees, shrubs, in or on the ground, and on artificial structures such as buildings, poles, and signs. No nesting birds were observed during biological surveys. Active nests could become established prior to construction. The nesting season is typically considered to be 15 February to 31 August for most bird species. Avoidance of vegetation removal during that time period, or surveys and avoidance of nests during that time period, could minimize impacts to nesting birds.

Grasshopper sparrow (*Ammodramus savannarum*)

HABITAT AND BIOLOGY: Grasshopper sparrow is a CDFW species of special concern (CDFW 2018). Grasshopper sparrows occur in California primarily as a summer resident from March to September (Shuford and Gardali 2008). Most migrate south in August or September. Grasshopper sparrows that winter in California are secretive and chiefly occur along the southern coast (CWHR 2018). The grasshopper sparrow's ecology varies substantially from region to region within its wide range, and has received very little study in California. In general, grasshopper sparrows in California prefer short to middle-height, moderately open grasslands with scattered shrubs. In some parts of the sparrow's California

range, native bunchgrasses appear to be important habitat components. However, this is probably not the case in most of the state, given that non-native annuals dominate most grasslands. Grasshopper sparrows are generally absent from areas with extensive shrub cover. Patchy bare ground has also been noted as an important habitat component.

Grasshopper sparrows breed from early April to mid-July, with a peak in May and June. A thick cover of grasses and forbs is essential for concealment. Pairs are generally solitary and build a nest of grasses and forbs in a slight depression in the ground, hidden at the base of an overhanging clump of grasses or forbs. They search for food on the ground and in low foliage within relatively dense grasslands (CWHR 2018).

RANGE: In California, grasshopper sparrow is an uncommon and local summer resident and breeder in foothills and lowlands west of the Cascade-Sierra Nevada crest, and from Mendocino and Trinity counties south to San Diego County (CWHR 2018). Agriculture and urbanization have greatly reduced numbers in the Central Valley, but anecdotal evidence indicates they still breed locally, primarily at the edges and in low foothills, but also sparingly on the Valley floor (Shuford and Gardali 2008).

KNOWN RECORDS: The nearest CNDDB record (Occurrence #15) is approximately 11.5 miles south of the BSA in habitat described as grassland, rolling hills, and swales. Two adults were observed in May 2007.

HABITAT PRESENT IN THE BSA: The grassland in the BSA provides potential habitat for grasshopper sparrow.

DISCUSSION: No grasshopper sparrows were observed during biological surveys of the BSA. Grasshopper sparrow is listed by the MBTA and regulated by CA Fish and Game Code. Nests could become established in or near the BSA before construction begins.

Golden eagle (*Aquila chrysaetos*)

HABITAT AND BIOLOGY: Golden eagles need open terrain for hunting such as grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats. Golden eagles use secluded cliffs with overhanging ledges and large trees for cover. Golden eagles nest on cliffs of all heights and in large trees in rugged, open areas with canyons and escarpments. Alternative nest sites are maintained and old nests are reused. Golden eagles breed from late January through August with a peak from March through July (CWHR 2018). Nesting and wintering sites are of concern to CDFW (2018).

RANGE: Golden eagles are an uncommon permanent resident and migrant throughout California, except the center of the Central Valley. This species is perhaps more common in southern California than in the north. Golden eagles range from sea level to 11,500 ft (CWHR 2018).

KNOWN RECORDS: The nearest CNDDB record (Occurrence #322) is located approximately 1.9 miles south of the BSA and approximately 0.1 miles west of Beatty Drive at Via Fiori in

El Dorado Hills, CA. In 2015, a nesting pair were observed on a grey pine in foothill pine and open oak woodland.

HABITAT PRESENT IN THE BSA: The BSA provides potential habitat for golden eagle. The large oak within the BSA has the potential to support a golden eagle nest. No nest was observed during the biological survey. There are numerous small-scale intermittent oak woodlands and grasslands within the immediate vicinity of the BSA and large-scale areas of undeveloped oak woodlands and grasslands, approximately 3 miles to the south and east of the BSA, that provide foraging habitat.

DISCUSSION: Golden eagle is listed by the MBTA and regulated by CA Fish and Game Code. Take of golden eagle is further regulated by the federal Bald and Golden Eagle Protection Act, and prohibited as a California fully-protected species. Golden eagle was not observed during the biological survey. A golden eagle nest could become established in or near the BSA before construction begins.

Burrowing Owl (*Athene cunicularia*)

HABITAT AND BIOLOGY: Burrowing owl is a CDFW species of special concern (CDFW 2018). Burrowing owls inhabit open, dry grassland and desert habitats, and grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats. Main habitat components include burrows for roosting and nesting, and vegetation of varying heights with sparse shrubs interspersed. Burrowing owls most commonly use ground squirrel burrows, but they may also use badger, coyote, and fox holes or dens; or human-made structures such as culverts, piles of concrete rubble, pipes and nest boxes. An active nest chamber is often lined with excrement, pellets, debris, grass, and feathers (CWHR 2018, Shuford and Gardali 2008).

Burrowing owl can thrive in highly altered human landscapes. In agricultural areas, owls nest along roadsides, under water conveyance structures, and near and under runways and similar structures. In urban areas, burrowing owls persist in low numbers in highly developed areas, busy urban parks, and adjacent to roads with heavy traffic. In the Imperial Valley, owls are able to excavate their own burrows in soft earthen banks of ditches and canals (Shuford and Gardali 2008).

Burrowing owls are a semi-colonial species that breeds from March through August, peaking in April and May, though breeding can begin as early as February and extend into December. The female typically lays two to ten eggs and young emerge from the burrow in about two weeks. The young are able to fly by week four. A large proportion of adults show strong nest site fidelity, though both young and adults have a high dispersal rate. Burrowing owls will perch in open sunlight in the early morning, and move to shade or the burrow when hot. Owls typically feed on a broad range of arthropods, but also feed on small rodents, birds, amphibians, reptiles, and carrion. Foraging usually occurs close to their burrow. The greatest threat to burrowing owls is habitat loss and degradation from rapid urbanization of farmland in the core of the Central and Imperial valleys (Shuford and Gardali 2008, CWHR 2018).

RANGE: Burrowing owls are a year-round resident in most of the state, particularly in the Central Valley, San Francisco Bay region, Carrizo Plain, and Imperial Valley. It is generally absent from the coastal counties north of Marin and mountainous areas above 5,300 feet. Burrowing owl has declined along the central and southern coast, but large populations remain in agricultural areas in the Central and Imperial valleys (CWHR 2018, Shuford and Gardali 2008). The BSA is outside the summer breeding range of burrowing owl, but within the winter range (CWHR 2018).

KNOWN RECORDS: The nearest CNDDB record (Occurrence #1166) is approximately 4 miles southeast of the BSA from 2006. Two adults were observed using burrows among rock outcrops.

HABITAT PRESENT IN THE BSA: The BSA is outside the summer, breeding range of burrowing owl (CWHR 2018). The BSA is within the winter range of burrowing owl and non-breeding owls have the potential to occur.

DISCUSSION: No burrowing owls or suitable mammal burrows were observed during the biological survey. Burrowing owl is listed by the MBTA and regulated by CA Fish and Game Code. Construction during the breeding season of burrowing owls (1 February – 30 August) would not impact nests because the BSA is outside the breeding range.

Bald eagle (*Haliaeetus leucocephalus*)

HABITAT AND BIOLOGY: Bald eagles occur along coasts, rivers, large, deep lakes and reservoirs inland. They require large bodies of water, or free-flowing rivers with abundant fish, and adjacent snags or other perches. Bald eagles perch in high, large, stoutly limbed trees, snags, broken topped trees, or high rock ledges. They nest in large, old growth, or dominant trees with open branch work, especially ponderosa pines. Bald eagles nest most frequently in stands with less than 40% canopy. Bald eagles breed from February through July, with peak activity from March to June. Bald eagles usually do not begin nesting if human disturbance is evident (CWHR 2018).

RANGE: Bald eagles are a permanent resident, and uncommon winter migrant, now restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity Counties. About half of the wintering population is in the Klamath basin. Bald eagles are more common at lower elevations and are not found in the high Sierra Nevada (CWHR 2018).

KNOWN RECORDS: The nearest CNDDB record (Occurrence #358) is located approximately 0.45 miles north of the BSA. In 2015 two adults were observed at the nest, on a grey pine at the south end of Folsom Lake.

HABITAT PRESENT IN THE BSA: The BSA provides potential habitat for golden eagle. The large oak within the BSA has the potential to support a bald eagle nest. No nest was observed during the biological survey. Folsom Lake is approximately 1000 ft north of the BSA and provides foraging habitat.

DISCUSSION: Bald eagle is listed by the MBTA and regulated by CA Fish and Game Code. Take of bald eagle is further regulated by the federal Bald and Golden Eagle Protection Act, and prohibited as a California fully-protected species. Bald eagle was not observed during the biological survey. A bald eagle nest could become established in or near the BSA before construction begins.

White-tailed kite (*Elanus leucurus*)

HABITAT AND BIOLOGY: White-tailed kite is a CA fully protected species (CDFW 2018). White-tailed kites occur in herbaceous and open stages of most habitats in cismontane CA. Areas with substantial groves of dense, broad-leafed deciduous trees are used for nesting and roosting. They also roost in saltgrass and Bermuda grass in southern CA. White-tailed kites breed from February to October, with peak activity from May to August. Nests are typically located near the top of dense oak, willow, or other tree stands from 20 to 100 feet above the ground, and are often located near an open foraging area with a dense population of voles (CWHR 2018).

RANGE: White-tailed kites are a year-round resident of coastal and valley lowlands in cismontane CA. They are absent from higher elevations in the Sierra Nevada, the Modoc Plateau, and from most desert regions (CWHR 2018).

KNOWN RECORDS: The nearest CNDDB record (Occurrence #149) is a nest approximately 1.3 miles south of the BSA from 2008. The surrounding habitat is described as disturbed annual grassland with widely scattered oaks. Two adults were observed at the nest location.

HABITAT PRESENT IN THE BSA: The BSA provides potential habitat for white-tailed kite. The large oak within the BSA has the potential to support a white-tailed kite nest. The grassland areas in the BSA could provide potential foraging habitat for white-tailed kite.

DISCUSSION: No white-tailed kites were observed during the biological survey. White-tailed kite is listed by the MBTA and regulated by CA Fish and Game Code. Take of white-tailed kite is further prohibited as a California fully-protected species. Nests could become established in or near the BSA before construction begins.

2. Mammals

Pallid bat (*Antrozous pallidus*)

HABITAT AND BIOLOGY: Pallid bat is a CDFW species of special concern (CDFW 2018). It occupies a wide variety of habitats including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. Pallid bat is most common in open, dry habitats with rocky areas for roosting. It feeds on a wide variety of insects and arachnids, foraging over open ground, usually 1.6 to 8 feet above level ground. Day roosts can be found in caves, crevices, mines, and occasionally in buildings and hollow trees. Roosts must protect bats from high temperatures. Night roosts may be in more open sites, such as porches and

open buildings. The pallid bat prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging (CWHR 2018). Pallid bat may be more dependent on tree roosts than was previously believed. They have been located in tree cavities in oak, ponderosa pine, coast redwood and giant sequoia (Bolster 1998).

RANGE: Locally common in low elevations in CA. Pallid bat occurs throughout CA and is a yearlong resident in most of the range (CWHR 2018).

KNOWN RECORDS: The nearest CNDDB record (Occurrence #233) is approximately 4.5 miles west of the BSA in Orangevale, CA. The CNDDB record is based on a record found in the Mammal Networked Information System, which contains records and specimens from several sources. A female specimen was collected 24 June 1941. No further information is provided.

HABITAT PRESENT IN THE BSA: The BSA provides marginal habitat for pallid bat due to the lack of cliffs or tall rock outcrops. The young horticultural trees within the BSA do not provide suitable habitat. The Valley oak is of adequate size to host potential roosting cavities for pallid bat. Sheds within the BSA provide potential night roosts.

DISCUSSION: The BSA contains marginal habitat and tree removal would be limited to small horticultural trees that lack cavities. Pallid bat has a wide range that encompasses most of the State. The BSA does not contain habitat that is unique or limited locally for pallid bat. No evidence of pallid bat or other bat species was observed during the biological survey.

American badger (*Taxidea taxus*)
HABITAT AND BIOLOGY: Badgers inhabit drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Burrows are dug in areas with dry, often sandy, soils with sparse overstory cover. The burrows are often reused. American badgers feed mostly on small rodents, but also reptiles, insects, earthworms, eggs, birds, and carrion depending on availability of prey (CWHR 2018).

Mating occurs in summer and early fall, with delayed implantation. Two to five young are born in burrows in March and April. Some females are able to breed in their first year, but males do not sexually mature until their second year. Home ranges documented outside California and Nevada varied between 338 acres and 1,549 acres. Family members may share the same territory as females, but males are generally solitary except during the breeding season. This species is tolerant of human activities, but is threatened by indiscriminate predator trapping and poisoning (CWHR 2018).

RANGE: This species is found throughout California except in the northern North Coast area (CWHR 2018).

KNOWN RECORDS: The nearest CNDDB record (Occurrence #489) is approximately 1.8 miles west of the BSA. On 17 May 2015, one dead adult badger was observed on East Natoma Street and appeared to have been killed by a vehicle.

HABITAT PRESENT IN THE BSA: The BSA provides potential habitat for American badger. Soils are friable and rodent prey is present in the BSA.

DISCUSSION: American badger or the dens were not observed during the biological survey, but one could become established prior to construction.

A. Evaluation of Special-Status Plants

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)

HABITAT AND BIOLOGY: Big-scale balsamroot is a perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine and rocky soils, from 295 to 5,100 feet. Blooms March through July (Baldwin et al. 2012; CNPS 2018).

RANGE: Known from the Sierra Nevada foothills, central high Sierra Nevada, Sacramento Valley, and eastern San Francisco Bay (Baldwin et al. 2012).

KNOWN RECORDS: The nearest CNDDB record (Occurrence #9) is based on a1957 collection approximately 12 miles northwest of the BSA. Big-scale balsamroot was observed on an uncultivated strip along railroad and U.S. Highway 99 East, 3.2 miles north of Roseville, CA.

HABITAT PRESENT IN THE BSA: Uplands in the BSA may provide potential habitat for big-scale balsamroot. Areas of the BSA where the soil is thin are more likely to support big-scale balsamroot than areas of thicker soil densely vegetated with grasses.

DISCUSSION: Big-scale balsamroot was not observed in the BSA during the biological survey conducted during the evident and identifiable blooming period.

Tuolumne button-celery (*Eryngium pinnatisectum*)

HABITAT AND BIOLOGY: Tuolumne button-celery is an annual to perennial herb found in mesic areas in cismontane woodland, lower montane coniferous forest, and vernal pools from 230 to 3,000 feet. Blooms May through August (Baldwin et al. 2012; CNPS 2018).

RANGE: Currently known from the northern and central Sierra Nevada foothills including Amador, Calaveras, Sacramento, and Tuolumne counties (Baldwin et al. 2012; CNPS 2018).

KNOWN RECORDS: The nearest CNDDB record is a 1941 collection approximately 13 miles south of the BSA (Occurrence #17). The exact location is unknown; the record was described as Michigan Bar just east of Sacramento.

HABITAT PRESENT IN THE BSA: The wetland swale in the BSA may provide potential habitat for Tuolumne button-celery.

DISCUSSION: Tuolumne button-celery was not observed in the BSA during the biological survey conducted during the evident and identifiable blooming period.

B. Evaluation of Sensitive Natural Communities

Wetland Swale

HABITAT PRESENT IN THE BSA: The U.S. Army Corps of Engineers verified a formal delineation of waters and wetlands in 2013. The Corps verified 0.27 acre of wetland swale in the BSA. A copy of the Verification Letter and Jurisdictional Delineation Map are in Appendix E. Current conditions of the wetland swale were evaluated during July 2018 fieldwork. The wetland swale has reduced in size. There are no riparian communities in the BSA, although there is one large Valley oak adjacent to the wetland swale.

DISCUSSION: The wetland swale is regulated as waters of the U.S. under the federal Clean Water Act (CWA), and under the State Fish and Game Code §1600 Streambed Alteration Program. Placement of fill in the features requires a CWA Section 404 permit from the U.S. Army Corps of Engineers and a Section 401 CWA water quality certification from the Regional Water Quality Control Board. Work in the swale would likely require a Streambed Alteration Agreement with the California Department of Fish and Wildlife (CDFW). The wetland swale is part of a drainage extending off-site and is more creek-like in some areas. CDFW has previously issued a 1600 agreement in the same drainage upstream.

The El Dorado County Zoning Ordinance was adopted on 15 December 2015 (El Dorado County Code Title 130). The Ordinance was enacted to implement the El Dorado County General Plan. County Zoning ordinance §130.30.030(G) states: '*All discretionary development which has the potential to impact wetlands or sensitive riparian habitat shall require a biological resource evaluation to establish the area of avoidance and any buffers or setbacks required to reduce the impacts to a less than significant level.*'

County Zoning Code §130.30.030(G) establishes standards for avoidance and minimization of impacts to wetlands and sensitive riparian habitat as provided in General Plan Policies 7.3.3.4 and 7.4.2.5. The standards apply to most waterbodies, wetlands, and riparian areas. In the BSA, the wetland swale is covered by this section of zoning code. The County Zoning Code identifies some specific setbacks for major waterbodies (§130.30.030(G)(7)), but none of the specific major waterbodies listed are in the BSA.

Figure 4. displays the 2013 Corps verified boundaries of the wetland swale. Since the end of strawberry cultivation, and associated irrigation, the size of the wetland swale has reduced. However, setbacks to the wetland swale should be based on the 2013 Corps verified boundaries until a revised Delineation map is verified by the Corps.

There are almost no riparian resources next to the wetland swale in the BSA. Upland grassland comes up to the edge of the wetland swale in most places. There was no historical riparian corridor before development in the area based on a 1962 aerial photograph (NRCS 1974). In some places there are small slopes (banks) adjacent to and confining the swale. A setback of 10 feet from the wetland swale would be sufficient to avoid impacts to the banks adjacent to parts of the swale.

There is a mature Valley oak tree along the edge of the creek, near the western BSA boundary. Extending the setback around the dripline of the tree would avoid impacts.

Oak Woodlands and Trees

There is one Valley oak tree in the BSA. The ORMP defines oak woodlands as areas that have at least 10% canopy cover. There is no oak woodland in the BSA.

DISCUSSION: The Valley oak tree has a diameter at breast height (dbh) of 65 inches and the dripline is on Figure 4. The Valley oak tree qualifies as a heritage tree under the Oak Resources Management Plan (ORMP) adopted by the County in October 2017. Heritage oaks, of at least 36 inches dbh, are regulated by size. Mitigation may occur based upon on-site replacement, off-site replacement or preservation, or payment of an in-lieu fee. If the Valley oak will be removed by the Project, mitigation consistent with the ORMP must be provided. If the Valley oak is removed, the following options could mitigate:

1. Replacement planting on-site within an area subject to a deed restriction or conservation easement;
2. Replacement planting off-site within an area subject to a conservation easement or acquisition in fee title by a land conservation organization;
3. In-lieu fee payment to be either used by the County to plant oak trees or to be given by the County to a land conservation organization to plant oak trees; or
4. A combination of numbers 1 through 3 above.

For heritage oaks, replacement is based on an inch-for-inch standard at a 3:1 ratio. Using this ratio, El Dorado County has calculated that the In-Lieu fee for heritage trees is $459.00 per inch (ORMP). The In-Lieu fee to remove the onsite heritage tree would be $29,835.00. For planting purposes El Dorado County considers two 1-gallon/ TreePot 4-sized containers to represent one inch of trunk diameter. If options 1 or 2 are used to mitigate for the Valley oak removal, 390 1-gallon or TreePot 4-sized containers would need to be planted.

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VII. PREPARERS

Jeffery Little, Vice President, Sycamore Environmental.
Responsibilities: Project Manager, Principal-in-charge.

Juan Mejia, B.S., Environmental Science and Management (emphasis Ecology, Conservation and Biodiversity), University of California, Davis, CA. Mr. Mejia has over 5 years of experience as a professional biologist. He conducts plant and wildlife surveys, construction monitoring, and prepares biological resource evaluations, permit applications, and other documents used in the CEQA/NEPA process. Serving as both field biologist and technical report writer, he conducts database research on special status species' biology, habitat and distribution. He holds a California Department of Fish and Wildlife Rare, Threatened and Endangered Plant Voucher Collecting Permit (2081(a)-18-013-V), is an authorized individual on the CDFW Scientific Collecting Permit (SC-7617), and a Forest Service Certification in Wilderness Ethics. Responsibilities: Fieldwork, Report preparation

Nicole Ibañez, B.S., Biological Sciences (concentration in Field and Wildlife Biology), California Polytechnic State University, San Luis Obispo, CA. Over 2 years of experience as a professional biologist. Ms. Ibañez conducts preconstruction and construction monitoring, assists with plant and wildlife surveys, wetland delineations, and assists with preparation of biological resource evaluations, Natural Environment Study reports, permit applications, and other documents used in the CEQA/NEPA process. Serving as both field biologist and technical report writer, she conducts database research on special status species' biology, habitat and distribution. She prepares maps and figures for biological and permitting documents such as project location maps, aerial photograph exhibits, soils maps, biological resource maps, wetlands/waters delineation maps, tree location maps and other supporting graphics. She holds a California Department of Fish and Wildlife Rare, Threatened and Endangered Plant Voucher Collecting Permit (2081(a)-16-107-V) and is an authorized individual on the CDFW Scientific Collecting Permit (SC-7617).
Responsibilities: Fieldwork, Figure and Report preparation

APPENDIX A

Database Queries

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2018-SLI-2790
Event Code: 08ESMF00-2018-E-08122
Project Name: Shadowfax Self Storage Project

July 20, 2018

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2018-SLI-2790

Event Code: 08ESMF00-2018-E-08122

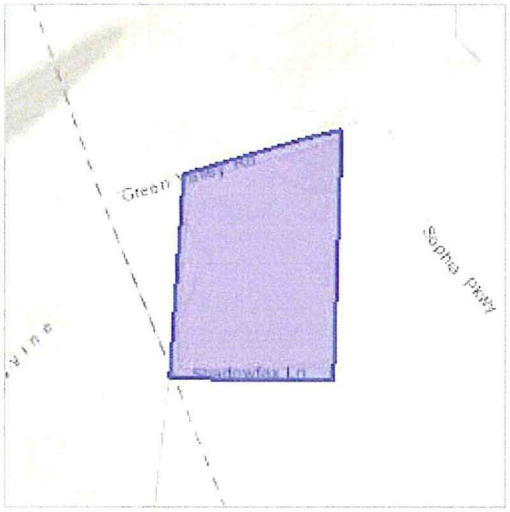
Project Name: Shadowfax Self Storage Project

Project Type: DEVELOPMENT

Project Description: 9.5 acre development on vacant lot.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.69985435232732N121.1085669247872W



Counties: El Dorado, CA | Sacramento, CA

Endangered Species Act Species

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. 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.

Reptiles

NAME	STATUS
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850 Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
El Dorado Bedstraw *Galium californicum ssp. sierrae* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5209	Endangered
Layne's Butterweed *Senecio layneae* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4062	Threatened
Pine Hill Ceanothus *Ceanothus roderickii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3293	Endangered
Pine Hill Flannelbush *Fremontodendron californicum ssp. decumbens* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4818	Endangered
Stebbins' Morning-glory *Calystegia stebbinsii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3991	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Rocklin (3812172) OR Clarksville (3812161) OR Pilot Hill (3812171) OR Coloma (3812078) OR Folsom (3812162) OR Shingle Springs (3812068) OR Buffalo Creek (3812152) OR Folsom SE (3812151) OR Latrobe (3812058))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Allium jepsonii Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Andrena blennospermatis Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	G2	S2	
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Ardea alba great egret	ABNGA04040	None	None	G5	S4	
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Banksula californica Alabaster Cave harvestman	ILARA14020	None	None	GH	SH	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Calystegia stebbinsii Stebbins' morning-glory	PDCON040H0	Endangered	Endangered	G1	S1	1B.1
Carex xerophila chaparral sedge	PMCYP03M60	None	None	G2	S2	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ceanothus roderickii Pine Hill ceanothus	PDRHA04190	Endangered	Rare	G1	S1	1B.1
Central Valley Drainage Hardhead/Squawfish Stream Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
Chlorogalum grandiflorum Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
Clarkia biloba ssp. brandegeeae Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
Cosumnoperla hypocrena Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
Crocanthemum suffrutescens Bisbee Peak rush-rose	PDCIS020F0	None	None	G2?Q	S2?	3.2
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Dumontia oregonensis hairy water flea	ICBRA23010	None	None	G1G3	S1	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Eryngium pinnatisectum Tuolumne button-celery	PDAPI0Z0P0	None	None	G2	S2	1B.2
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Fremontodendron decumbens Pine Hill flannelbush	PDSTE03030	Endangered	Rare	G1	S1	1B.2
Galium californicum ssp. sierrae El Dorado bedstraw	PDRUB0N0E7	Endangered	Rare	G5T1	S1	1B.2
Gratiola heterosepala Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Hydrochara rickseckeri Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
Juncus leiospermus var. ahartii Ahart's dwarf rush	PMJUN011L1	None	None	G2T1	S1	1B.2
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G5	S3S4	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Navarretia myersii ssp. myersii pincushion navarretia	PDPLM0C0X1	None	None	G2T2	S2	1B.1
Northern Hardpan Vernal Pool Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
Northern Volcanic Mud Flow Vernal Pool Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	G1	S1.1	
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Orcuttia tenuis slender Orcutt grass	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
Orcuttia viscida Sacramento Orcutt grass	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Packera layneae Layne's ragwort	PDAST8H1V0	Threatened	Rare	G2	S2	1B.2
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Pekania pennanti fisher - West Coast DPS	AMAJF01021	None	Threatened	G5T2T3Q	S2S3	SSC
Phalacrocorax auritus double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Progne subis purple martin	ABPAU01010	None	None	G5	S3	SSC
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Spea hammondii western spadefoot	AAABF02020	None	None	G3	S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
Valley Needlegrass Grassland Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Wyethia reticulata El Dorado County mule ears	PDAST9X0D0	None	None	G2	S2	1B.2

Record Count: 65

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

30 matches found. *Click on scientific name for details*

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B, 3, 4], Found in Quads 3812172, 3812171, 3812078, 3812162, 3812161, 3812068, 3812152 3812151 and 3812058;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
Allium sanbornii var. sanbornii	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S3S4	G4T3T4
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	(Jan)Mar-Jun	4.2	S4	G4
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	1B.1	S1	G1
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	1B.2	S2	G2
Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3	S4	G4
Ceanothus roderickii	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	1B.1	S1	G1
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	1B.2	S3	G3
Clarkia biloba ssp. brandegeeae	Brandegee's clarkia	Onagraceae	annual herb	May-Jul	4.2	S4	G4G5T4
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Crocanthemum suffrutescens	Bisbee Peak rush-rose	Cistaceae	perennial evergreen shrub	Apr-Aug	3.2	S2?	G2?Q
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
Erigeron miser	starved daisy	Asteraceae	perennial herb	Jun-Oct	1B.3	S3?	G3?
Eriophyllum jepsonii	Jepson's woolly sunflower	Asteraceae	perennial herb	Apr-Jun	4.3	S3	G3
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual / perennial herb	May-Aug	1B.2	S2	G2
Fremontodendron decumbens	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	1B.2	S1	G1
Galium californicum ssp. sierrae	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	1B.2	S1	G5T1
Gratiola heterosepala	Boggs Lake	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2

	hedge-hyssop						
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.2	S2	G2
Juncus leiospermus var. ahartii	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	1B.2	S1	G2T1
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
Lilium humboldtii ssp. humboldtii	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	4.2	S3	G4T3
Navarretia myersii ssp. myersii	pincushion navarretia	Polemoniaceae	annual herb	Apr-May	1B.1	S2	G2T2
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	1B.1	S2	G2
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	1B.1	S1	G1
Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	1B.2	S2	G2
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Trichostema rubisepalum	Hernandez bluecurls	Lamiaceae	annual herb	Jun-Aug	4.3	S4	G4
Wyethia reticulata	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	1B.2	S2	G2

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 20 July 2018].

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APPENDIX B

Species Evaluated Table

Special-Status Species from USFWS Letter, CNDDB Data, CNPS Data

Special-Status Species/ Common Name	Federal Status [a,b]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Invertebrates					
Branchinecta lynchi Vernal pool fairy shrimp	T, CH	--	1,2	Exist only in vernal pools or vernal pool-like habitats. Individuals have never been found in riverine, marine, or other permanent bodies of water. Water movement within complexes allows movement between individual pools. Currently found in 28 counties across the Central Valley and coast ranges of California. Occupies a variety of vernal pool habitats (USFWS 2005).	No. There are no vernal pools in the BSA. The BSA is not in critical habitat.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	T, CH	--	1,2	Requires an elderberry shrub (*Sambucus* sp.) as a host plant (USFWS 1999a).	No. There are no elderberry shrubs in the BSA. The BSA is not in critical habitat.
Lepidurus packardi Vernal pool tadpole shrimp	E, CH	--	1, 2	Occurs in vernal pools and sometimes other areas of similar hydrology across the Central Valley of California and in the San Francisco Bay area. Requires a minimum of about 25 days to mature, and usually inhabits large, deep vernal pools that pool continuously for many months (USFWS 2005). They can also make use of smaller pools that are present as part of a larger vernal pool complex (Witham *et al.* 1998), and they may be able tolerate temporary dry conditions (USFWS 2005).	No. There are no vernal pools in the BSA. The BSA is not in critical habitat.
Fish					
Hypomesus transpacificus Delta smelt	T, CH	T	1	Euryhaline (tolerant of a wide salinity range) species that spawns in freshwater dead-end sloughs and shallow edge-waters of channels of the Delta (USFWS 1994).	No. The project is outside the range and there is no suitable habitat. The BSA is not in critical habitat.
Oncorhynchus mykiss Central Valley steelhead DPS	T, CH	--	2	Anadromous salmonid historically distributed throughout the Sacramento and San Joaquin river drainages. While steelhead are found elsewhere in the Sacramento River system, the principal remaining wild populations are a few hundred fish that spawn annually in Deer and Mill Creeks in Tehama County and a population of unknown size in the lower Yuba River. With the possible exception of a small population in the lower Stanislaus River, steelhead appear to have been extirpated from the San Joaquin system (Moyle 2002). Spawning occurs in small tributaries on coarse gravel beds in riffle areas (Busby *et al.* 1996). Federal listing includes all runs in the Sacramento and San Joaquin Rivers and their tributaries (CDFW 2018).	No. There is no suitable habitat. The BSA is not in critical habitat.

Special-Status Species/ Common Name	Federal Status [a,b]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Amphibians					
Ambystoma californiense California tiger salamander (central population)	T, CH	T	1, 2	Occurs in grassland, oak savannah, and edges of mixed woodland and lower elevation coniferous forest. Spends much time underground in mammal burrows. Requires pools lasting approximately 10 weeks or longer to complete larval development (Jennings and Hayes 1994). Usually breeds in temporary ponds such as vernal pools but may also breed in slower parts of streams and some permanent waters (Stebbins 2003). The state listing refers to the entire range of the species. The federal threatened listing is only for the Central Valley population. The Sonoma and Santa Barbara populations are federally listed as endangered (CDFW 2018).	No. The BSA is outside the current range. There is no breeding habitat in the BSA. The BSA is not in critical habitat.
Rana boylii Foothill yellow-legged frog	--	CT/ SSC	2	Found in or near rocky streams in a variety of habitats, including valley-foothills hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types. Egg clusters are attached to gravel or rocks in moving water near stream margins. This species is rarely encountered (even on rainy nights) far from permanent water. Its elevation range extends from near sea level to 6,370 ft in the Sierra (CWHR 2018).	No. The BSA is outside the current range. There is no suitable aquatic habitat within the BSA.
Rana draytonii California red-legged frog	T, CH	SSC	1, 2	Inhabits quiet pools of streams, marshes, and occasionally ponds with dense, shrubby, or emergent vegetation. Requires permanent or nearly permanent pools for larval development (CWHR 2018; USFWS 2010). The range of CA red-legged frog extends from near sea level to approximately 5,200 ft, though nearly all sightings have occurred below 3,500 ft. California red-legged frog was probably extirpated from the floor of the Central Valley before 1960 (USFWS May 2002).	No. There is no breeding habitat in the BSA and no known populations within dispersal distance. The wetland swale in the BSA is too small and does not stay inundated long enough. The BSA is not in critical habitat (USFWS 2010).
Speahammondi Western spadefoot	--	SSC	2	Ranges throughout the Central Valley and adjacent foothills and is usually quite common where it occurs. Occurs primarily in grasslands, but occasionally occurs in valley-foothill hardwood woodlands (CWHR 2018). Primarily found in the lowlands frequenting washes, floodplains of rivers, alluvial fans, playas, and alkali flats. Also ranges into foothills and mountains. Prefers areas of open vegetation and short grasses with sandy or gravelly soil (Stebbins 2003). Spends most of the year in underground burrows up to 36 inches deep, which they generally construct themselves. Most surface movements by adults are associated with rains or high humidity at night. Breeding and egg laying occur almost exclusively in shallow, temporary pools formed by heavy winter rains (CWHR 2018).	No. There is no suitable habitat.
Reptiles					
Emys marmorata Western pond turtle	--	SSC	2	Prefers aquatic habitats with abundant vegetative cover and exposed basking sites such as logs. Associated with permanent or nearly permanent water in a wide variety of habitat types, normally in ponds, lakes, streams, irrigation ditches, or permanent pools along intermittent streams (CWHR 2018).	No. The wetland swale in the BSA is too small and does not stay inundated long enough.

Special-Status Species/ Common Name	Federal Status [a,b]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Phrynosoma blainvillii Coast (California) horned lizard	--	SSC	2	Occurs in valley and foothill hardwood, conifer, and riparian habitats, as well as in pine-cypress, juniper and annual grasslands up to 4,000 ft in the Sierra Nevada and 6,000 ft in southern California Basks in the early morning. Often associated with sandy or loose soil areas (CWHR 2018). Feeds mostly on native ants. Tends not to persist where the argentine ant invades (Suarez *et al.* 2000, Suarez and Case 2002).	No, there are no sandy soils in the BSA. All four CNDDB records in El Dorado County are from gabbroic northern mixed chaparral. There are no records in Sacramento County.
Thamnophis gigas Giant garter snake	T	T	1, 2	Endemic to the wetlands of the Sacramento and San Joaquin valleys, inhibiting the tule marshes and seasonal wetlands created by overbank flooding of the rivers and streams. Requires 1) freshwater aquatic habitat with protective emergent vegetative cover that allows foraging; 2) upland habitat near the aquatic habitat that can be used for thermoregulation and summer shelter in burrows; and 3) upland refugia that serve as winter hibernacula (USFWS 2017).	No. The BSA is outside the range.
Birds					
Agelaius tricolor Tricolored blackbird	--	SSC/ CE	2	Forages on ground in cropland, grassland, and on pond edges. Nests near freshwater, preferably in emergent marsh densely vegetated with cattails or tules, but also in thickets of willow, blackberry, and wild rose. Highly colonial; nesting area must be large enough to support a minimum colony of about 50 pairs (CWHR 2018). Chooses areas with widespread water and large, thick patches of vegetation for colonies to reduce predation (Hamilton 2004).	No. Suitable breeding habitat does not occur in the BSA.
Ammodramus savannarum Grasshopper sparrow	--	SSC	2	An uncommon local summer resident and breeder in foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity cos. south to San Diego Co. Occurs in dry, dense grasslands, especially with scattered shrubs for sitting perches. A thick cover of grasses and forbs is essential for concealment. Nests are built of grasses and forbs in slight depressions in ground hidden by a clump of grasses or forbs. Usually nests solitarily from early April to mid-July. May form semicolonial breeding groups of 3-12 pairs (CWHR 2018).	Yes. See text.
Aquila chrysaetos Golden eagle	--	FP	2	Uncommon permanent resident and migrant throughout California, except in the central portion of the Central Valley. Perhaps more common in southern California than in northern California. Ranges from sea level up to 11,500 ft (Grinnell and Miller 1944). Typically inhabits rolling foothills, mountainous areas, sage-juniper flats, and deserts. Uses secluded cliffs with overhanging ledges and large trees for cover. Nest on cliffs of all heights and in large trees in open areas. Rugged, open habitats with canyons and escarpments are used most frequently for nesting. Needs open terrain for hunting (CWHR 2018).	No. Suitable habitat does not occur in the BSA.
Athene cunicularia *Burrowing owl*	--	SSC	2	Yearlong resident of open, dry grassland and desert habitat, and in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats. Uses small mammal burrows, often ground squirrel, for roosting and nesting cover (CWHR 2018).	Yes. See text.

Special-Status Species/ Common Name	Federal Status [a,b]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Buteo swainsoni Swainson's hawk	--	T	2	Uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen Co., and Mojave Desert. Nests in stands with few trees in juniper-sage flats, in riparian areas and in oak savannah in the Central Valley. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures. Feeds on small birds, rodents, mammals, reptiles, large arthropods, amphibians, and, rarely, fish (CWHR 2018).	No. The BSA is outside the range.
Elanus leucurus White-tailed kite	--	FP	2	Yearlong resident in coastal and valley lowlands. Rarely found away from agricultural areas. Inhabits herbaceous and open stages of most habitats, mostly in cismontane California. Substantial groves of dense, broad-leafed deciduous trees are used for nesting and roosting. Nest placed near top of dense oak, willow, or other tree stand located near open foraging area. Forages in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands (CWHR 2018).	Yes. See text.
Haliaeetus leucocephalus Bald eagle	D	E/ FP	2	Occurs along coasts, rivers, and large, deep lakes and reservoirs in California. Nests mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity cos. More widespread as a winter migrant. Requires large bodies of water or free flowing rivers with abundant fish and perching sites. Nests in large old growth and dominant live trees with open branchwork. Favors ponderosa pine (CWHR 2018).	Yes. See text.
Laterallus jamaicensis coturniculus California black rail	--	T	2	Year-long resident of saline, brackish, and fresh emergent wetlands in the San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern CA at Morro Bay and a few other locations, the Salton Sea, and the lower Colorado River area. Occurs most commonly in tidal emergent wetlands dominated by pickleweed, or in brackish marshes supporting bulrushes and pickleweed. Found in immediate vicinity of tidal sloughs. In freshwater habitat, usually found in bulrushes, cattails, and saltgrass. Nests are concealed in dense vegetation near upper limits of tidal flooding. Occasionally found away from wetlands in late summer and autumn. May overwinter in locations where it does not breed (CWHR 2018).	No. Suitable habitat does not occur in the BSA.
Progne subis Purple martin	--	SSC	2	Widely distributed throughout nearly the entire eastern U.S. In the western U.S, occurs in the Rocky Mountains, Sonoran Desert, Central Mexico, and Pacific Coast states (Shuford and Gardali 2008). Breeding occurs from April into August. Generally, inhabits open areas with an open water source nearby. Purple martins nest colonially or singly in cavities both natural and human-made. Purple martins are not as likely to use nest boxes in CA as they are in the eastern U.S (CWHR 2018). All current known nesting sites in Sacramento are in vertical weep holes beneath bridges built of steel and concrete box girders over urban areas and railroad tracks (Airola and Grantham 2003). Nesting sites are of concern to CDFW (2018).	No. Suitable habitat does not occur in the BSA.

Special-Status Species/ Common Name	Federal Status [a,b]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Ripariariparia Bank swallow	--	T	2	Found primarily west of CA deserts in riparian and other lowland habitats during the spring-fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine textured sandy soils, into which it digs nesting holes. About 75% of the breeding population in CA occurs along banks of the Sacramento and Feather Rivers in the northern Central Valley. Other colonies are known from the central coast from Monterey to San Mateo cos., and in northeastern California in Shasta, Siskiyou, Lassen, Plumas, and Modoc cos. Breeding colonies can have between 10 and 1,500, but typically between 100 and 200, nesting pairs (CWHR 2018).	No. There is no suitable habitat.
Mammals					
Antrozous pallidus Pallid bat	--	SSC	2	Occupies many habitats including desert, grasslands, shrublands, woodlands, rocky canyons, oak savannah, redwood, open farmland and mixed conifer forest from sea level up to 3,000 ft (Bolster 1998, CWHR 2018). Prefers open, dry habitats with rocky areas for roosting, and rock outcrops, cliffs, and crevices with access to open habitats for foraging. Day roosts in caves, crevices, mines, and occasionally buildings and hollow trees. Night roosts may be more open, such as porches and open buildings. Social, often roosting in groups of 20 or more. Absent in the northwest from Del Norte and western Siskiyou cos. south to northern Mendocino Co. (CWHR 2018). May be more dependent on tree roosts than was previously realized. They have been located in tree cavities in oak, ponderosa pine, coast redwood and giant sequoia (Bolster 1998).	Yes. See text.
Pekania pennanti Fisher – West Coast DPS	--	CT/ SSC	2	Permanent resident of the Sierra Nevada, Cascades, Klamath Mountains, and the North Coast Range. Occurs above 3,200 ft in the Sierra Nevada and Cascades (Jameson and Peeters 2004). Occurs in coniferous or deciduous riparian habitats with intermediate to large trees and closed canopies. Dens in protected cavities, brush piles, logs, or under an upturned tree. Hollow logs, trees, and snags are especially important. Mostly nocturnal and crepuscular (CWHR 2018).	No. The BSA is outside the range.
Taxidea taxus American badger	--	SSC	2	Found throughout most of CA except the northern North Coast. Abundant in drier open stages of many shrub, forest, and herbaceous habitats with friable soils. Feeds on fossorial rodents, some reptiles, insects, earthworms, bird eggs, and carrion (CWHR 2018).	Yes. See text.
Plants		**/ CNPS [d]**			
Allium jepsonii Jepson's onion	--	--/ 1B.2	2	Bulbiferous herb found in serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 984 to 4,331 ft. Known from Butte, El Dorado, Placer, and Tuolumne cos. Blooms April through August (Baldwin et al. 2012; CNPS 2018).	No. There are no suitable soils in the BSA.
Balsamorhiza macrolepis Big-scale balsamroot	--	--/ 1B.2	2	Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils, from 295 to 5,102 ft. Known from the Bay Area, Sacramento Valley, and Sierra foothills. Blooms March through July (Baldwin et al. 2012; CNPS 2018).	Yes. See text.

Special-Status Species/ Common Name	Federal Status [a,b]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Calystegia stebbinsii Stebbins' morning-glory	E	E/ 1B.1	1, 2	Perennial rhizomatous herb found in serpentine or gabbroic soils in openings in chaparral and cismontane woodland from 607 to 3,576 ft. Known from El Dorado and Nevada cos. Blooms April through July (Baldwin et al. 2012, CNPS 2018).	No. There are no suitable soils in the BSA. The BSA is outside the range. In El Dorado County this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the County.
Carex xerophila chaparral sedge	--	--/1B.2	2	A newly described perennial cespitose herb known from serpentine or gabbro soils (Zika et al. 2014). Occurs in uplands in full sun to partial shade, in open forest or chaparral, from 1,475 to 2,525 ft. Known from Butte, El Dorado, Nevada, and Yuba cos. Although there is no published blooming period, most collections are from April, May, or June (CCH 2018, Zika et al. 2014).	No. There are no suitable soils in the BSA.
Ceanothus roderickii Pine Hill ceanothus	E	R/ 1B.1	1, 2	Perennial evergreen shrub found on serpentine or gabbroic soils in chaparral and cismontane woodland from 804 to 2,067 ft. Known from less than 10 occurrences in El Dorado Co. Blooms April through June (Baldwin et al. 2012, CNPS 2018).	No. There are no suitable soils in the BSA. The BSA is outside the range. In El Dorado County this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the County.
Chlorogalum grandiflorum Red Hills soaproot	--	--/ 1B.2	2	Perennial bulbiferous herb found in serpentine, gabbroic, and other soils in chaparral, cismontane woodland, and lower montane coniferous forest from 804 to 4,067 ft. Known from Amador, Butte, Calaveras, El Dorado, Placer, and Tuolumne cos. Blooms May through June (Baldwin et al. 2012, CNPS 2018).	No. There are no suitable soils in the BSA. In El Dorado County this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the County.
Crocanthemum suffrutescens Bisbee Peak rush-rose	--	--/ 3.2	2	Perennial evergreen shrub found often in gabbroic or Ione soils, burned or disturbed areas, and chaparral from 246 to 2198 ft. Known from Amador, Calaveras, and El Dorado cos. Blooms April through August (Baldwin et al. 2012, CNPS 2018).	No. There are no suitable soils, or chaparral in the BSA. In El Dorado County this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the County.
Downingia pusilla Dwarf downingia	--	--/ 2B.2	2	Annual herb found in mesic valley and foothill grassland and vernal pools from 3 to 1,460 ft. Known from the north Coast Range, Bay Area, and Central Valley. Blooms March through May (Baldwin et al. 2012, CNPS 2018).	No. There are no vernal pools or vernal pool complexes in the BSA. The range does not extend into the Sierra foothills.
Erigeron miser Starved daisy	--	--/ 1B.3		Perennial herb found on rocky substrates in upper montane coniferous forest from 6,000 to 8,600 ft. Known from the northern high Sierra Nevada. Blooms June through October (CNPS 2018). Jepson eFlora (2018) describes the habitat as rocky sites.	No. The BSA is outside of the elevation range of this species.
Eryngium pinnatisectum Tuolumne button-celery	--	--/ 1B.2	2	Annual to perennial herb found in mesic areas of cismontane woodland, lower montane coniferous forests, and vernal pools/swales, and intermittent streams from 230 to 3,000 ft. Known from Amador, Calaveras, Sacramento, and Tuolumne cos. Blooms May through August (Baldwin et al. 2012, CNPS 2018).	Yes. See text.

Special-Status Species/ Common Name	Federal Status [a,b]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Fremontodendron decumbens Pine Hill flannelbush	E	R/ 1B.2	1, 2	Perennial evergreen shrub found on rocky, gabbroic, and serpentine soil in chaparral and cismontane woodland from 1,394 to 2,494 ft. Known from 10 occurrences in El Dorado, Nevada, and Yuba cos. Uncertain about distribution or identity in Nevada and Yuba cos. Blooms April through July (Baldwin et al. 2012, CNPS 2018).	No. There are no suitable soils in the BSA. In El Dorado County this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the County.
Galium californicum ssp. *sierrae* El Dorado bedstraw	E	R/ 1B.2	1, 2	Perennial herb found in gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 330 to 1,920 ft. Known from El Dorado County. Blooms March through July (Baldwin et al. 2012, CNPS 2018).	No. There are no suitable soils in the BSA. In El Dorado County this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the County.
Gratiola heterosepala Boggs Lake hedge-hyssop	--	E/ 1B.2	2	Annual herb found in clay soils in marshes and swamps (lake margins) and vernal pools from 30 to 7,800 ft (CNPS 2018). Known from the Modoc Plateau, Warner Mountains, high Cascade Range, inner north Coast Range, Central Valley, and northern and central Sierra Nevada foothills. Blooms April through August (Jepson eFlora 2018).	No. There are no suitable soils. Not known to occur in El Dorado County.
Horkelia parryi Parry's horkelia	--	--/ 1B.2	2	Perennial herb found on Ione formation and in other soils in chaparral and cismontane woodland from 260 to 3,510 ft. Known from Amador, Calaveras, El Dorado, and Mariposa cos. Blooms April through September (Baldwin et al. 2012, CNPS 2018). Jepson eFlora (2018) describes the habitat as open chaparral.	No. There are no suitable soils or chaparral in the BSA. Only known in El Dorado County east of Placerville.
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	--	--/ 1B.2	2	Annual herb found in mesic areas in valley and foothill grassland from 100 to 750 ft. Known from Butte, Calaveras, Placer, Sacramento, Tehama, and Yuba cos. Blooms March through May (CNPS 2018). Occurs exclusively in vernal pools and swales within vernal pool complexes (CCH 2018)	No. The wetland swale in the BSA is not in a vernal pool complex.
Legenere limosa Legenere	--	--/ 1B.1	2	Annual herb found in vernal pools from 3 to 2900 ft. Known from Alameda, Lake, Monterey, Napa, Placer, Sacramento, Santa Clara, Shasta, San Joaquin, San Mateo, Solano, Sonoma, Tehama, and Yuba cos. Presumed extirpated in Stanislaus Co. Blooms April through June (Baldwin et al. 2012, CNPS 2018).	No. There are no vernal pools or vernal pool complexes in the BSA. The range does not extend into the Sierra foothills.
Navarretia myersii ssp. *myersii* Pincushion navarretia	--	--/ 1B.1	2	Annual herb found in vernal pools, often with acidic conditions, from 65 to 1,100 ft. Known from Amador, Calaveras, Merced, Placer, and Sacramento cos. Blooms April through May (Stanislaus Co. Blooms April through June (Baldwin et al. 2012, CNPS 2018).	No. There are no vernal pools or vernal pool complexes in the BSA.
Orcuttia tenuis Slender Orcutt grass	T	E/ 1B.1	2	Annual herb found in vernal pools, often gravelly, from 115 to 5,800 ft. Blooms May through October (CNPS 2018). Found primarily on substrates of volcanic origin in pools classified as northern volcanic ashflow or mudflow vernal pools, but also found on Redding soils in Sacramento County. Known from pools at least 0.2 ac in size (1.6 ac median) and 11.8 inches deep and typically occurs in the deepest area of the pool (USFWS 2003).	No. There are no vernal pools or vernal pool complexes in the BSA.

Special-Status Species/ Common Name	Federal Status [a,b]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Orcuttia viscida Sacramento Orcutt grass	E, CH	E/ 1B.1	2	Annual herb found in vernal pools from 98 to 328 ft. Known only from Sacramento County. Blooms April through September (Baldwin et al. 2012, CNPS 2018). Known from northern hardpan and volcanic mudflow vernal pools. Known only from Sacramento County in pools of at least 0.25 ac (USFWS 2003).	No. There are no vernal pools or vernal pool complexes in the BSA.
Packera (=Senecio) layneae Layne's ragwort	T	R/ 1B.2	1, 2	Perennial herb found in rocky serpentine or gabbroic soils in chaparral and cismontane woodland from 650 to 3,560 ft. Known from Butte, El Dorado, Placer, Tuolumne, and Yuba cos. Blooms April through August (Baldwin et al. 2012, CNPS 2018).	No. There are no suitable soils in the BSA. In El Dorado County this species is known primarily from the gabbro soils of the Pine Hill formation, elsewhere in the County.
Sagittaria sanfordii Sanford's arrowhead	--	--/ 1B.2	2	A perennial emergent rhizomatous herb found in assorted shallow freshwater marshes and swamps from 0 to 2,130 ft. Known from northwestern CA, Cascade foothills, Central Valley, and South Coast. Blooms May through November (Baldwin et al. 2012, CNPS 2018).	No. There is no suitable habitat. The wetland swale does not retain sufficient inundation into the summer dry season.
Wyethia reticulata El Dorado County mule ears	--	--/ 1B.2	2	Perennial rhizomatous herb found on clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest from 600 to 2,100 ft. Known from El Dorado and Yuba cos. Blooms April through August (Baldwin et al. 2012, CNPS 2018).	No. There are no suitable soils in the BSA. In El Dorado County this species is known from the gabbro soils of the Pine Hill formation, elsewhere in the County.
Natural Communities					
Central Valley drainage hardhead/ squawfish stream	--	--	2	Hardhead occur in low- to mid-elevation streams in the main Sacramento-San Joaquin drainage and in the Russian River. Their range extends from the Kern River in Kern County, in the south, to the Pit River in Modoc County in the north. In the San Joaquin drainage, the species is scattered in tributary streams and absent from valley reaches of the San Joaquin River. In the Sacramento drainage, the hardhead is present in most large tributary streams as well as in the Sacramento River. Hardhead are typically found in undisturbed areas of larger low- to mid-elevation streams, although they are also found in the mainstem Sacramento River at low elevations and in its tributaries to about 4,920 ft. They prefer clear, deep (>32 inches) pools and runs with sand-gravel-boulder substrates and slow velocities. Hardhead are always found in association with Sacramento pikeminnow (squawfish) and usually with Sacramento sucker. They tend to be absent from streams where introduced species, especially centrarchids (sunfish), predominate and from streams that have been severely altered by human activity. Sacramento pikeminnow occur in clear rivers and creeks of central California and occur in small numbers in the Sacramento-San Joaquin Delta. They are most characteristic of low- to mid-elevation streams with deep pools, slow runs, and undercut banks, and overhanging vegetation. They are most abundant in lightly disturbed, tree-lined reaches that also contain other native fish (Moyle 2002).	No. This community does not occur in the BSA. The wetland swale in the BSA is too small to support this community.

Special-Status Species/ Common Name	Federal Status [a,b]	State Status [a,b]	Source [c]	Habitat Requirements	Potential to Occur in the BSA
Northern hardpan vernal pool	--	--	2	A low emergent wetland community dominated by annual herbs and grasses on very acidic soils with an iron-silicon cemented hardpan. Evaporation (not runoff) dries pools in spring creating concentric bands of vegetation. Occurs primarily on old alluvial terraces on the east side of the Great Valley from Tulare or Fresno County north to Shasta County (Holland 1986).	No. There are no vernal pools in the BSA.
Northern Volcanic Mud Flow Vernal Pool				A very low, open mixture of amphibious annual herbs and grasses. Pools are typically small, covering at most a few square meters. Restricted to irregular depressions in shallow soil in tertiary pyroclastic flows. Pools form in small depressions following winter rains. Characteristic species include: *Downingia bicornuta, Lasthenia glaberrima, Limnanthes douglasii rosea, Navarretia tagetina.* Distribution is scattered on flat-topped mesas along the Sierran foothills, mostly between 500-2000 ft in the Blue Oak Woodland and Gray-Pine Chaparral Woodland (Holland 1986).	No. There are no vernal pools in the BSA.
Valley Needlegrass Grassland	--	--		Grassland dominated by the perennial tussock-forming bunchgrass *Stipa (=Nassella)pulchra* with annuals occurring between bunches. Usually on fine-textured (often clay) soils, moist or waterlogged in winter, but very dry in summer. Historically occurred in Sacramento, San Joaquin, and Salinas valleys, as well as the Los Angeles Basin. Present range greatly reduced (Holland 1986).	No. *Stipa pulchra* does not occur in the BSA.

[a] **Listing Status** **E** = Endangered; **T** = Threatened; **P** = Proposed; **C** = Candidate; **R** = California Rare; **D** = Delisted; * = Possibly extinct.

[b] **Other Codes** **SSC** = CA Species of Special Concern; **FP** = CA Fully Protected; **Prot** = CA Protected; **CH** = Critical habitat designated.

CNPS Rank (plants only): **1A** = Presumed Extinct in CA; **1B** = Rare or Endangered (R/E) in CA and elsewhere; **2** = R/E in CA and more common elsewhere; **3** = Need more information; **4** = Plants of limited distribution

CNPS List Decimal Extensions:.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); **.2** = Fairly endangered in CA (20-80% of occurrences threatened); **.3** = Not very endangered in CA (< 20% of occurrences threatened or no current threats known).

[c] **Source:** **1** = USFWS letter. **2** =CNDDB/CNPS.**3** = Observed or included by Sycamore Environmental.

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APPENDIX C

Plant and Wildlife Species Observed

FAMILY	SCIENTIFIC NAME	COMMON NAME	NATIVE/ INTRODUCED	CAL-IPC PEST RATING [1]
EUDICOTS				
Anacardiaceae	*Schinus molle*	Pepper tree	I	Limited
Apiaceae	*Torilis arvensis*	Tall sock-destroyer	I	Moderate
Apocynaceae	*Nerium oleander*	Common oleander	I	
Asteraceae	*Anthemis cotula*	Mayweed	I	
	Baccharis pilularis	Coyote Brush	N	--
	Carduus pycnocephalus ssp. *pycnocephalus*	Italian thistle	I	Moderate
	Centaurea solstitialis	Yellow star-thistle	I	High
	Dittrichia graveolens	Stinkwort	I	Moderate
	Erigeron bonariensis	Flax-leaved horseweed	I	
	Erigeron sumatrensis	Tropical horseweed	I	
	Helminthotheca echioides	Bristly ox-tongue	I	Limited
	Lactuca sp.	Lettuce	--	--
	Leontodon saxatilis	Hairy hawkbit	I	
	Silybum marianum	Milk thistle	I	Limited
	Sonchus asper ssp. *asper*	Prickly sow thistle	I	
	Sonchus oleraceus	Common sow thistle	I	
	Xanthium strumarium	Cocklebur	N	
Brassicaceae	*Hirschfeldia incana*	Hirschfeldia	I	Moderate
	Lepidium latifolium	Perennial pepperweed	I	High
	Nasturtium officinale	Water cress	N	--
	Raphanus sativus	Radish	I	Limited
Cannabaceae	*Celtis sinensis*	Chinese hackberry	I	
Convolvulaceae	*Convolvulus arvensis*	Bindweed, orchard morning-glory	I	
Crassulaceae	*Crassula* sp.	Crassula	--	--
Euphorbiaceae	*Croton setigerus*	Turkey-mullein	N	--
	Triadica sebifera	Chinese tallowtree	I	Moderate
Fabaceae	*Acmispon americanus* var. *americanus*	Deervetch	N	
	Melilotus albus	White sweetclover	I	
	Trifolium hirtum	Rose clover	I	Moderate
	Vicia villosa	Hairy vetch, winter vetch	I	
Fagaceae	*Quercus lobata*	Valley oak	N	--
Gentianaceae	*Zeltnera muehlenbergii*	Monterey centaury	N	
Ginkgoaceae	*Ginkgo biloba*	Ginkgo	I	--
Hypericaceae	*Hypericum perforatum* ssp. *perforatum*	Klamathweed	I	Moderate
Lamiaceae	*Mentha pulegium*	Pennyroyal	I	Moderate
Moraceae	*Ficus carica*	Edible fig	I	Moderate
Lythraceae	*Lythrum hyssopifolia*		I	Limited
Myrsinaceae	*Lysimachia arvensis*	Scarlet pimpernel	I	
Onagraceae	*Epilobium ciliatum*	Willowherb	N	
	Epilobium densiflorum	Willowherb	N	--
Plantaginaceae	*Kickxia elatine*		I	
	Plantago lanceolata	English plantain	I	Limited
	Veronica anagallis-aquatica	Water speedwell	I	
Polygonaceae	*Persicaria punctata*	Smartweed	N	
	Rumex sp.	Dock	--	--

Rosaceae	*Malus pumila*	Apple	I	
	Prunus persica	Peach	I	
	Rubus armeniacus	Himalayan blackberry	I	High
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	N	--
	Salix laevigata	Red willow	N	
	Salix gooddingii	Goodding's black willow	N	
Ulmaceae	*Ulmus* sp.	Elm	--	--
Viscaceae	*Phoradendron villosum*	Oak mistletoe	N	--
Zygophyllaceae	*Tribulus terrestris*		I	--
MONOCOTS				
Arecaceae	*Washingtonia robusta*	Mexican fan palm	I	Moderate
Cyperaceae	*Cyperus eragrostis*	Nutsedge	N	--
	Eleocharis macrostachya		N	
Juncaceae	*Juncus balticus* ssp. *ater*	Baltic rush	N	
	Juncus xiphioides	Iris-leaved rush	N	
Poaceae	*Avena* sp.	Oat	I	--
	Elymus caput-medusae	Medusa head	I	High
	Bromus diandrus	Ripgut grass	I	Moderate
	Bromus hordeaceus	Soft chess	I	Limited
	Cynodon dactylon	Bermuda grass	I	Moderate
	Festuca perennis	Rye grass	I	Moderate
	Leersia oryzoides	Rice cutgrass	N	
	Panicum capillare	Witch grass	N	
	Paspalum dilatatum	Dallis grass	I	
	Polypogon monspeliensis	Annual beard grass, rabbitfoot grass	I	Limited
Typhaceae	*Typha angustifolia*	Narrow-leaved cattail	N/I	

[1] High/Moderate/Limited = CA-IPC Inventory; reflects level of each species' negative ecological impact in California.

Wildlife species observed

COMMON NAME	SCIENTIFIC NAME
BIRDS	
American crow	*Corvus brachyrhynchos*
California quail	*Callipepla californica*
California towhee	*Pipilo crissalis*
Common raven	*Corvus corax*
House finch	*Carpodacus mexicanus*
Northern mockingbird	*Mimus polyglottos*
MAMMALS	
Desert cottontail	*Sylvilagus audubonii*
REPTILES	
Western fence lizard	*Sceloporus occidentalis*

APPENDIX D

Photographs
18 July 2018

Photo 1. View looking south towards Nonnative Annual Grassland from the northwest corner of the BSA.

Photo 2. View looking northwest towards Nonnative Annual Grassland from the southeast corner of the BSA.

Photo 3. View looking east towards the Wetland Swale from the culvert inlet on the east side of the BSA. Water enters the BSA from the woodland in the background.

Photo 4. View looking west towards the Wetland Swale from the culvert outlet on the east side of the BSA.

Photo 5. The Wetland Swale near the center of the BSA. Areas where the swale had channelized were deeper and small areas of water were present during the July survey.

Photo 6. View looking east towards the Wetland Swale and the large Valley oak from the west edge of the BSA. Utility shed is just left of the Valley oak.

Photo 7. View of the 65 inch dbh Valley oak trunk in the BSA.

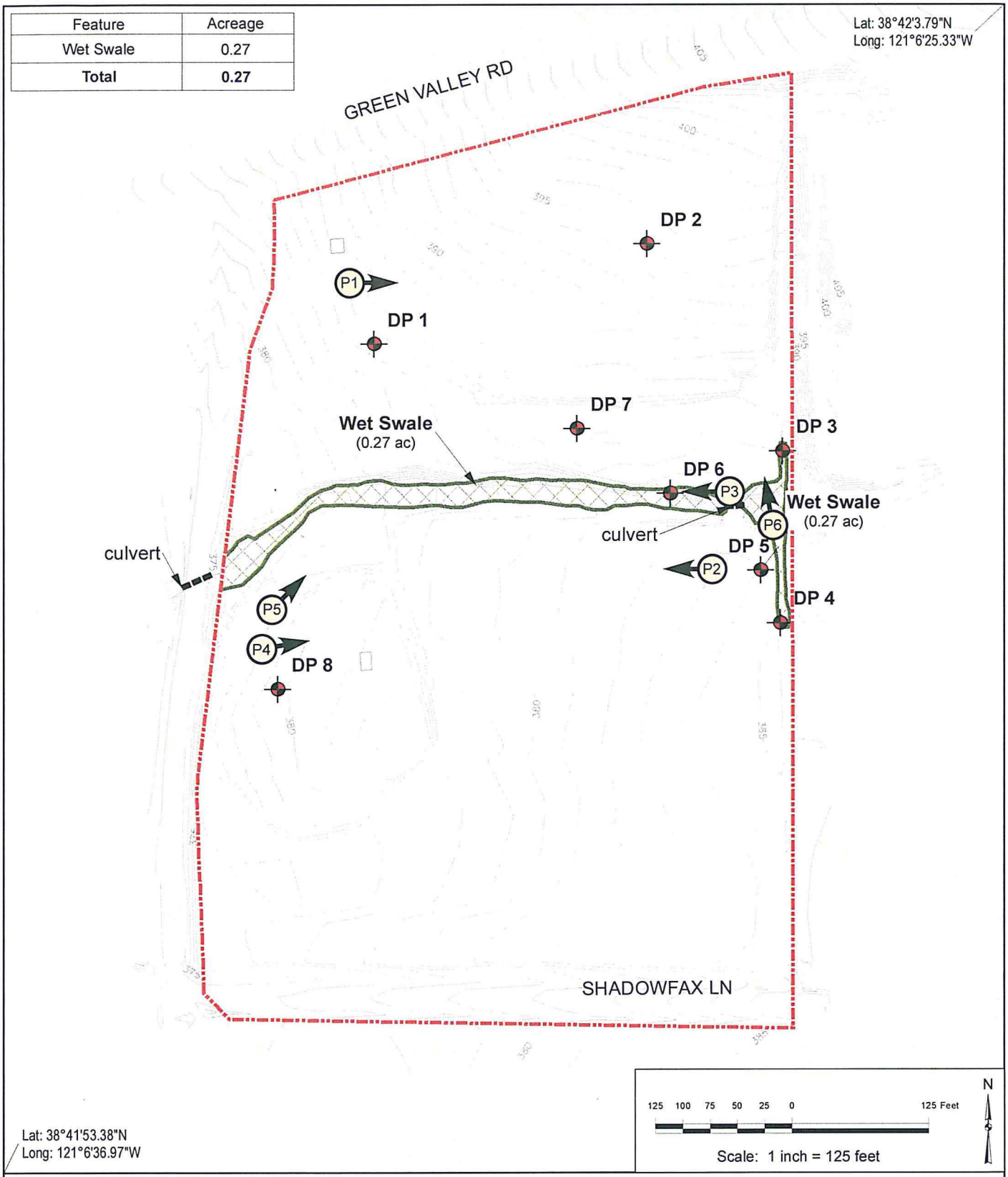
Photo 9. View looking east towards the shed once used for strawberry production.

Photo 10. View looking southwest towards Nonnative annual grassland from the northeast corner of the BSA. Trees in the background are horticultural specimens planted by the nursery that closed in 2014.

APPENDIX E

2013 Jurisdictional Delineation Map
& Verification Letter

Feature	Acreage
Wet Swale	0.27
Total	**0.27**



Green Valley Nursery
El Dorado Hills, CA
4 December 2013

Jurisdictional Delineation Map

Biological Study Area (BSA)
Wet Swale
Data point and Number
Culvert
P1 Photopoint Location and Direction

SYCAMORE Environmental Consultants, Inc.

Date	Submittal	Delineator(s)	Agency/Company
25 April 06	Original	S. Stringer	Sycamore Environmental

Basemap:
E-TPO-565401.dwg
Carlton Engineering, Inc.

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

December 12, 2013

Regulatory Division (SPK-2013-01118)

Ms. Barbara Orosco
1000 Orosco Drive
El Dorado Hills, California 95672

Dear Ms. Orosco:

We are responding to your December 6, 2013, request for a preliminary jurisdictional determination (JD), in accordance with our Regulatory Guidance Letter (RGL) 08-02, for the Green Valley Nursery Site. The approximately 9.55-acre site is located in Section 21, Township 10 North, Range 8 East, Mount Diablo Meridian, Latitude 38.69966°, Longitude -121.10866°, El Dorado Hills, El Dorado County, California.

Based on available information, we concur with the amount and location of wetlands on the site as depicted on the enclosed December 4, 2013, *Jurisdictional Delineation Map, Green Valley Nursery drawing* prepared by Sycamore Environmental Consultants, Inc., (enclosure 1). The approximately 0.27 acre of wetlands present within the survey area are potential waters of the United States regulated under Section 404 of the Clean Water Act.

We have enclosed a copy of the *Preliminary Jurisdictional Determination Form* for this site (enclosure 2). Please sign and return a copy of the completed form to this office. Once we receive a copy of the form with your signature we can accept and process a Pre-Construction Notification or permit application for your proposed project.

You should not start any work in potentially jurisdictional waters of the United States unless you have Department of the Army permit authorization for the activity. You may request an approved JD for this site at any time prior to starting work within waters. In certain circumstances, as described in RGL 08-02, an approved JD may later be necessary.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This preliminary determination has been conducted to identify the potential limits of wetlands and other water bodies which may be subject to Corps of Engineers' jurisdiction for the particular site identified in this request. A Notification of Appeal

Process and Request for Appeal form is enclosed to notify you of your options with this determination. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are U.S. Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2013-01118 in any correspondence concerning this project. If you have any questions, please contact Mr. Peck Ha at our California North Branch Office, Regulatory Division, Sacramento District, U.S. Army Corps of Engineers, 1325 J Street, Room 1350, Sacramento, California 95814-2922, by email at *Peck.Ha@usace.army.mil*, or telephone at 916-557-6617. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/Missions/Regulatory.aspx*.

Sincerely,

Nancy Arcady Haley

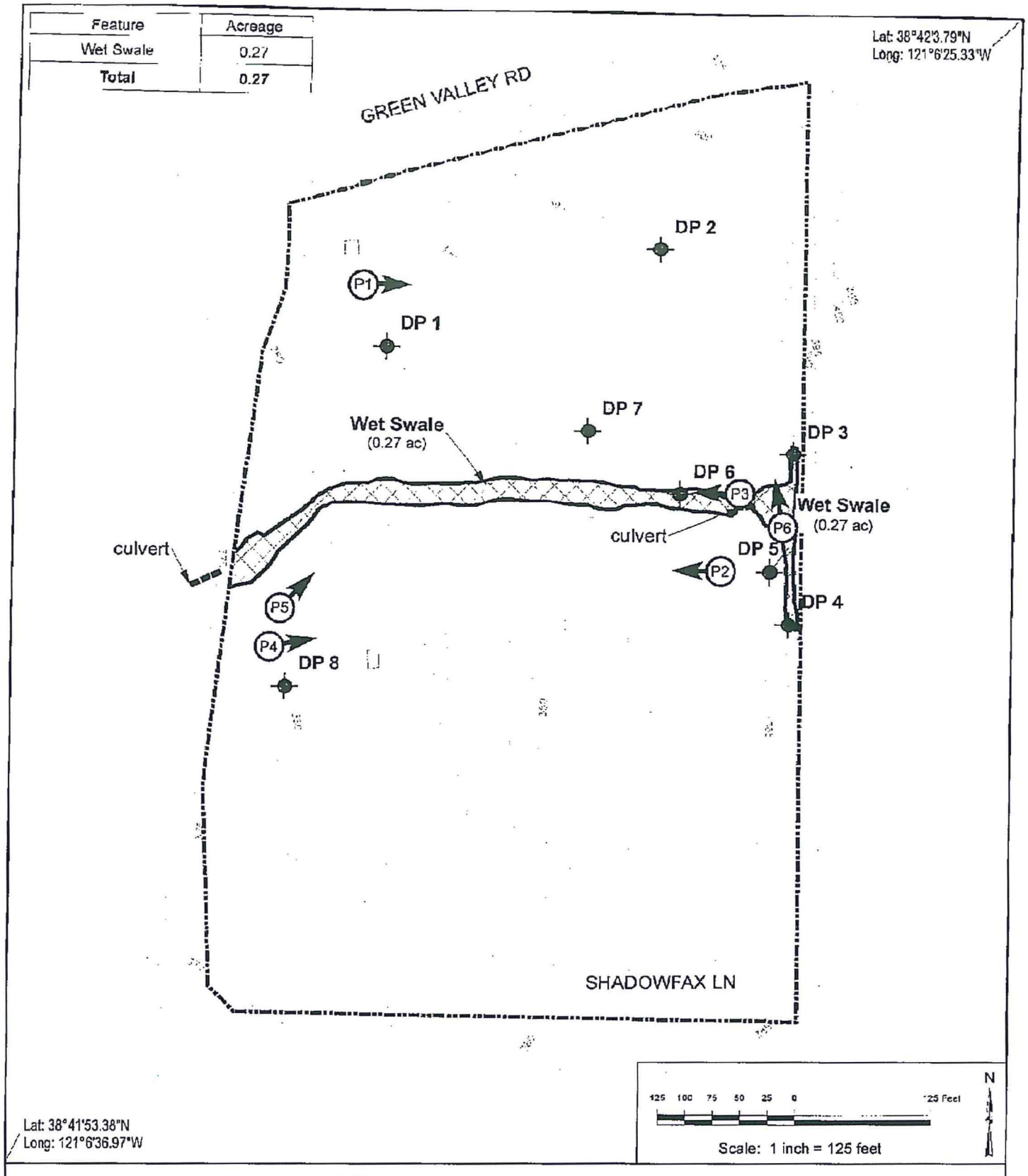
Nancy Arcady Haley
Chief, California North Branch

Enclosures

cc: (w/o encls)

Mr. Elizabeth Lee, California Regional Water Quality Control Board, Central Valley Region, 11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Mr. Paul Jones, U.S. Environmental Protection Agency, Region IX, Wetlands Regulatory Office (WTR-8), 75 Hawthorne Street, San Francisco, California, 94105-3901
Ms. Tina Bartlett, California Department of Fish and Game, Region 2, 1701 Nimbus Drive, Rancho Cordova, California 95670-4599
Mr. Ken Sanchez, U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901

Feature	Acreage
Wet Swale	0.27
Total	**0.27**



Green Valley Nursery
El Dorado Hills, CA
4 December 2013

Jurisdictional Delineation Map

Biological Study Area (BSA)
Wet Swale
Data point and Number
Culvert
P1 Photopoint Location and Direction

SYCAMORE Environmental Consultants, Inc.

Date	Submittal	Delineator(s)	Agency/Company
25 April 06	Original	S. Stringer	Sycamore Environmental

Basemap:
E-TPO-565401.dwg
Carlton Engineering, Inc.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM
Sacramento District

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Regulatory Branch: **California North** File/ORM #: **SPK-2013-01118** PJD Date: **December 12, 2013**

State: **CA** City/County: **El Dorado Hills, El Dorado County**
Nearest Waterbody: **American River**
Location (Lat/Long): **38.69966°, -121.10866°**
Size of Review Area: **9.55** acres

Name/Address Of Property Owner/ Potential Applicant: **Ms. Barbara Orosco**
1000 Orosco Drive
El Dorado Hills, California 95672

Identify (Estimate) Amount of Waters in the Review Area
Non-Wetland Waters:
linear feet ft wide acre(s)
Stream Flow: **N/A**

Wetlands: **0.27** acre(s) Cowardin Class: **Palustrine, emergent**

Name of any Water Bodies on the site identified as Section 10 Waters: Tidal: Non-Tidal:

☐ Office (Desk) Determination
☒ Field Determination:
Date(s) of Site Visit(s): **January 13, 2013**

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply – checked items should be included in case file and, where checked and requested, appropriately reference sources below)

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **December 4, 2013, Jurisdictional Delineation Map, Green Valley Nursery drawing prepared by Sycamore Environmental Consultants, Inc**
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Data sheets prepared by the Corps.
☐ Corps navigable waters' study.
☐ U.S. Geological Survey Hydrologic Atlas:
  ☐ USGS NHD data.
  ☐ USGS HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: **1:24K; CA-CLARKSVILLE**
☐ USDA Natural Resources Conservation Service Soil Survey.
☐ National wetlands inventory map(s).
☐ State/Local wetland inventory map(s).
☐ FEMA/FIRM maps.
☐ 100-year Floodplain Elevation (if known):
☒ Photographs: ☒ Aerial ☐ Other
☐ Previous determination(s). File no. and date of response letter:
☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

12/12/2013

Signature and Date of Regulatory Project Manager (REQUIRED)

Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Ms. Barbara Orosco,	File No.: SPK-2013-01118	Date: December 12, 2013
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
	APPROVED JURISDICTIONAL DETERMINATION	D
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at *http://www.usace.army.mil/cecw/pages/reg_materials.aspx* or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Peck Ha
Regulatory Project Manager, California North Branch
U.S. Army Corps of Engineers
1325 J Street, Room 1350
Sacramento, California 95814-2922
Phone: 916-557-6617, FAX 916-557-7803
Email: Peck.Ha@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: 415-503-6574, FAX 415-503-6646)
Email: Thomas.J.Cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:

EDH - Folsom Self Storage (Orosco Self Storage)

El Dorado-Mountain County County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	168.10	1000sqft	3.86	168,100.00	0
Other Asphalt Surfaces	168.00	1000sqft	3.86	168,000.00	0
Single Family Housing	1.00	Dwelling Unit	0.32	1,800.00	3

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	70
Climate Zone	1			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No Demolition

Architectural Coating - Used 50 g/L VOC Flat Coatings limit for Interior, 150 g/L VOC High Gloss Coatings limit for Exterior, and 100 g/L VOC Traffic Marking Coatings limit for parking lot striping per Rule 215 Architectural Coatings

Land Use Change - Assumed 7.72 acres of impermeable surface on the 9.4 acre site.

Sequestration - Assumed 20 new trees planted as landscaping

EDH - Folsom Self Storage (Orosco Self Storage) - El Dorado-Mountain County County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblSequestration	NumberOfNewTrees	0.00	20.00

2.0 Emissions Summary

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					
2019	0.4437	3.8906	3.1728	6.6400e-003	0.3275	0.1832	0.5107	0.1299	0.1718	0.3017	0.0000	597.4862	597.4862	0.0883	0.0000	599.6928
2020	0.6384	0.1518	0.1715	2.8000e-004	3.3300e-003	8.2900e-003	0.0116	8.9000e-004	7.7100e-003	8.6000e-003	0.0000	24.5582	24.5582	6.4500e-003	0.0000	24.7194
Maximum	**0.6384**	**3.8906**	**3.1728**	**6.6400e-003**	**0.3275**	**0.1832**	**0.5107**	**0.1299**	**0.1718**	**0.3017**	**0.0000**	**597.4862**	**597.4862**	**0.0883**	**0.0000**	**599.6928**

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					
2019	0.4436	3.8906	3.1728	6.6400e-003	0.3275	0.1832	0.5107	0.1299	0.1718	0.3017	0.0000	597.4858	597.4858	0.0883	0.0000	599.6925
2020	0.6384	0.1518	0.1715	2.8000e-004	3.3300e-003	8.2900e-003	0.0116	8.9000e-004	7.7100e-003	8.6000e-003	0.0000	24.5582	24.5582	6.4500e-003	0.0000	24.7194
Maximum	**0.6384**	**3.8906**	**3.1728**	**6.6400e-003**	**0.3275**	**0.1832**	**0.5107**	**0.1299**	**0.1718**	**0.3017**	**0.0000**	**597.4858**	**597.4858**	**0.0883**	**0.0000**	**599.6925**

	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	1-1-2019	3-31-2019	1.1246	1.1246
2	4-1-2019	6-30-2019	1.0578	1.0578
3	7-1-2019	9-30-2019	1.0695	1.0695
4	10-1-2019	12-31-2019	1.0744	1.0744
5	1-1-2020	3-31-2020	0.7928	0.7928
		Highest	1.1246	1.1246

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	0.9411	1.3400e-003	0.0880	1.4000e-004		0.0109	0.0109		0.0109	0.0109	1.0330	0.4513	1.4843	9.8000e-004	8.0000e-005	1.5331
Energy	7.0000e-005	5.6000e-004	2.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	3.1709	3.1709	1.3000e-004	4.0000e-005	3.1846
Mobile	0.1259	0.4805	1.5512	3.8600e-003	0.3151	5.4300e-003	0.3205	0.0845	5.1200e-003	0.0897	0.0000	350.9483	350.9483	0.0137	0.0000	351.2908
Waste						0.0000	0.0000		0.0000	0.0000	32.2269	0.0000	32.2269	1.9046	0.0000	79.8407
Water						0.0000	0.0000		0.0000	0.0000	12.3533	61.3354	73.6887	1.2716	0.0305	114.5770
Total	**1.0670**	**0.4824**	**1.6395**	**4.0000e-003**	**0.3151**	**0.0164**	**0.3314**	**0.0845**	**0.0161**	**0.1006**	**45.6131**	**415.9059**	**461.5191**	**3.1909**	**0.0307**	**550.4262**

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	0.9411	1.3400e-003	0.0880	1.4000e-004		0.0109	0.0109		0.0109	0.0109	1.0330	0.4513	1.4843	9.8000e-004	8.0000e-005	1.5331
Energy	7.0000e-005	5.6000e-004	2.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	3.1709	3.1709	1.3000e-004	4.0000e-005	3.1846
Mobile	0.1259	0.4805	1.5512	3.8600e-003	0.3151	5.4300e-003	0.3205	0.0845	5.1200e-003	0.0897	0.0000	350.9483	350.9483	0.0137	0.0000	351.2908
Waste						0.0000	0.0000		0.0000	0.0000	32.2269	0.0000	32.2269	1.9046	0.0000	79.8407
Water						0.0000	0.0000		0.0000	0.0000	12.3533	61.3354	73.6887	1.2716	0.0305	114.5770
Total	**1.0670**	**0.4824**	**1.6395**	**4.0000e-003**	**0.3151**	**0.0164**	**0.3314**	**0.0845**	**0.0161**	**0.1006**	**45.6131**	**415.9059**	**461.5191**	**3.1909**	**0.0307**	**550.4262**

	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**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	14.1600
Vegetation Land Change	-26.0324
Total	**-11.8724**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/14/2019	5	10	
2	Grading	Grading	1/15/2019	2/11/2019	5	20	
3	Building Construction	Building Construction	2/12/2019	12/30/2019	5	230	
4	Paving	Paving	12/31/2019	1/27/2020	5	20	
5	Architectural Coating	Architectural Coating	1/28/2020	2/24/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 3.86

Residential Indoor: 3,645; Residential Outdoor: 1,215; Non-Residential Indoor: 252,150; Non-Residential Outdoor: 84,050; Striped Parking Area: 10,080 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

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
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	142.00	55.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

3.2 Site Preparation - 2019

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	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
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	4.8000e-004	3.1000e-004	3.3200e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.1000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6547	0.6547	2.0000e-005	0.0000	0.6553
Total	**4.8000e-004**	**3.1000e-004**	**3.3200e-003**	**1.0000e-005**	**7.1000e-004**	**1.0000e-005**	**7.1000e-004**	**1.9000e-004**	**1.0000e-005**	**1.9000e-004**	**0.0000**	**0.6547**	**0.6547**	**2.0000e-005**	**0.0000**	**0.6553**

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	**0.0217**	**0.2279**	**0.1103**	**1.9000e-004**	**0.0903**	**0.0120**	**0.1023**	**0.0497**	**0.0110**	**0.0607**	**0.0000**	**17.0843**	**17.0843**	**5.4100e-003**	**0.0000**	**17.2195**

3.2 Site Preparation - 2019

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	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
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	4.8000e-004	3.1000e-004	3.3200e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.1000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6547	0.6547	2.0000e-005	0.0000	0.6553
Total	**4.8000e-004**	**3.1000e-004**	**3.3200e-003**	**1.0000e-005**	**7.1000e-004**	**1.0000e-005**	**7.1000e-004**	**1.9000e-004**	**1.0000e-005**	**1.9000e-004**	**0.0000**	**0.6547**	**0.6547**	**2.0000e-005**	**0.0000**	**0.6553**

3.3 Grading - 2019

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					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0258	0.2835	0.1629	3.0000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	26.6423	26.6423	8.4300e-003	0.0000	26.8530
Total	**0.0258**	**0.2835**	**0.1629**	**3.0000e-004**	**0.0655**	**0.0140**	**0.0795**	**0.0337**	**0.0129**	**0.0465**	**0.0000**	**26.6423**	**26.6423**	**8.4300e-003**	**0.0000**	**26.8530**

3.3 Grading - 2019

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	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
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	8.0000e-004	5.2000e-004	5.5300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0912	1.0912	4.0000e-005	0.0000	1.0921
Total	**8.0000e-004**	**5.2000e-004**	**5.5300e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.1900e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**1.0912**	**1.0912**	**4.0000e-005**	**0.0000**	**1.0921**

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					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0258	0.2835	0.1629	3.0000e-004		0.0140	0.0140		0.0129	0.0129	0.0000	26.6422	26.6422	8.4300e-003	0.0000	26.8530
Total	**0.0258**	**0.2835**	**0.1629**	**3.0000e-004**	**0.0655**	**0.0140**	**0.0795**	**0.0337**	**0.0129**	**0.0465**	**0.0000**	**26.6422**	**26.6422**	**8.4300e-003**	**0.0000**	**26.8530**

3.3 Grading - 2019

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	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
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	8.0000e-004	5.2000e-004	5.5300e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0912	1.0912	4.0000e-005	0.0000	1.0921
Total	**8.0000e-004**	**5.2000e-004**	**5.5300e-003**	**1.0000e-005**	**1.1800e-003**	**1.0000e-005**	**1.1900e-003**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**1.0912**	**1.0912**	**4.0000e-005**	**0.0000**	**1.0921**

3.4 Building Construction - 2019

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	0.2715	2.4241	1.9738	3.0900e-003		0.1483	0.1483		0.1395	0.1395	0.0000	270.3698	270.3698	0.0659	0.0000	272.0164
Total	**0.2715**	**2.4241**	**1.9738**	**3.0900e-003**		**0.1483**	**0.1483**		**0.1395**	**0.1395**	**0.0000**	**270.3698**	**270.3698**	**0.0659**	**0.0000**	**272.0164**

3.4 Building Construction - 2019

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	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
Vendor	0.0349	0.8902	0.3071	1.7100e-003	0.0411	7.4600e-003	0.0486	0.0119	7.1400e-003	0.0190	0.0000	161.7735	161.7735	3.9700e-003	0.0000	161.8728
Worker	0.0875	0.0566	0.6022	1.3200e-003	0.1286	1.0500e-003	0.1296	0.0342	9.7000e-004	0.0352	0.0000	118.7920	118.7920	4.2100e-003	0.0000	118.8972
Total	**0.1223**	**0.9467**	**0.9093**	**3.0300e-003**	**0.1697**	**8.5100e-003**	**0.1782**	**0.0461**	**8.1100e-003**	**0.0542**	**0.0000**	**280.5655**	**280.5655**	**8.1800e-003**	**0.0000**	**280.7700**

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	0.2715	2.4241	1.9738	3.0900e-003		0.1483	0.1483		0.1395	0.1395	0.0000	270.3695	270.3695	0.0659	0.0000	272.0161
Total	**0.2715**	**2.4241**	**1.9738**	**3.0900e-003**		**0.1483**	**0.1483**		**0.1395**	**0.1395**	**0.0000**	**270.3695**	**270.3695**	**0.0659**	**0.0000**	**272.0161**

3.4 Building Construction - 2019

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	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
Vendor	0.0349	0.8902	0.3071	1.7100e-003	0.0411	7.4600e-003	0.0486	0.0119	7.1400e-003	0.0190	0.0000	161.7735	161.7735	3.9700e-003	0.0000	161.8728
Worker	0.0875	0.0566	0.6022	1.3200e-003	0.1286	1.0500e-003	0.1296	0.0342	9.7000e-004	0.0352	0.0000	118.7920	118.7920	4.2100e-003	0.0000	118.8972
Total	**0.1223**	**0.9467**	**0.9093**	**3.0300e-003**	**0.1697**	**8.5100e-003**	**0.1782**	**0.0461**	**8.1100e-003**	**0.0542**	**0.0000**	**280.5655**	**280.5655**	**8.1800e-003**	**0.0000**	**280.7700**

3.5 Paving - 2019

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	7.3000e-004	7.6200e-003	7.3300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	1.0238	1.0238	3.2000e-004	0.0000	1.0319
Paving	2.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8000e-004**	**7.6200e-003**	**7.3300e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**1.0238**	**1.0238**	**3.2000e-004**	**0.0000**	**1.0319**

3.5 Paving - 2019

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	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
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	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0546	0.0546	0.0000	0.0000	0.0546
Total	**4.0000e-005**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0546**	**0.0546**	**0.0000**	**0.0000**	**0.0546**

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	7.3000e-004	7.6200e-003	7.3300e-003	1.0000e-005		4.1000e-004	4.1000e-004		3.8000e-004	3.8000e-004	0.0000	1.0238	1.0238	3.2000e-004	0.0000	1.0319
Paving	2.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.8000e-004**	**7.6200e-003**	**7.3300e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**1.0238**	**1.0238**	**3.2000e-004**	**0.0000**	**1.0319**

3.5 Paving - 2019

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	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
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	4.0000e-005	3.0000e-005	2.8000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0546	0.0546	0.0000	0.0000	0.0546
Total	**4.0000e-005**	**3.0000e-005**	**2.8000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0546**	**0.0546**	**0.0000**	**0.0000**	**0.0546**

3.5 Paving - 2020

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	0.0129	0.1336	0.1392	2.2000e-004		7.1500e-003	7.1500e-003		6.5800e-003	6.5800e-003	0.0000	19.0268	19.0268	6.1500e-003	0.0000	19.1807
Paving	4.8000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0177**	**0.1336**	**0.1392**	**2.2000e-004**		**7.1500e-003**	**7.1500e-003**		**6.5800e-003**	**6.5800e-003**	**0.0000**	**19.0268**	**19.0268**	**6.1500e-003**	**0.0000**	**19.1807**

3.5 Paving - 2020

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	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
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	7.1000e-004	4.4000e-004	4.7000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0045	1.0045	3.0000e-005	0.0000	1.0053
Total	**7.1000e-004**	**4.4000e-004**	**4.7000e-003**	**1.0000e-005**	**1.1200e-003**	**1.0000e-005**	**1.1300e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0045**	**1.0045**	**3.0000e-005**	**0.0000**	**1.0053**

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	0.0129	0.1336	0.1392	2.2000e-004		7.1500e-003	7.1500e-003		6.5800e-003	6.5800e-003	0.0000	19.0268	19.0268	6.1500e-003	0.0000	19.1806
Paving	4.8000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0177**	**0.1336**	**0.1392**	**2.2000e-004**		**7.1500e-003**	**7.1500e-003**		**6.5800e-003**	**6.5800e-003**	**0.0000**	**19.0268**	**19.0268**	**6.1500e-003**	**0.0000**	**19.1806**

3.5 Paving - 2020

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	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
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	7.1000e-004	4.4000e-004	4.7000e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0045	1.0045	3.0000e-005	0.0000	1.0053
Total	**7.1000e-004**	**4.4000e-004**	**4.7000e-003**	**1.0000e-005**	**1.1200e-003**	**1.0000e-005**	**1.1300e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0045**	**1.0045**	**3.0000e-005**	**0.0000**	**1.0053**

3.6 Architectural Coating - 2020

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					
Archit. Coating	0.6162					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582
Total	**0.6186**	**0.0168**	**0.0183**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**2.5533**	**2.5533**	**2.0000e-004**	**0.0000**	**2.5582**

3.6 Architectural Coating - 2020

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	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
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	1.3900e-003	8.6000e-004	9.2400e-003	2.0000e-005	2.2000e-003	2.0000e-005	2.2200e-003	5.9000e-004	2.0000e-005	6.0000e-004	0.0000	1.9737	1.9737	6.0000e-005	0.0000	1.9753
Total	**1.3900e-003**	**8.6000e-004**	**9.2400e-003**	**2.0000e-005**	**2.2000e-003**	**2.0000e-005**	**2.2200e-003**	**5.9000e-004**	**2.0000e-005**	**6.0000e-004**	**0.0000**	**1.9737**	**1.9737**	**6.0000e-005**	**0.0000**	**1.9753**

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					
Archit. Coating	0.6162					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582
Total	**0.6186**	**0.0168**	**0.0183**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**2.5533**	**2.5533**	**2.0000e-004**	**0.0000**	**2.5582**

3.6 Architectural Coating - 2020

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	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
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	1.3900e-003	8.6000e-004	9.2400e-003	2.0000e-005	2.2000e-003	2.0000e-005	2.2200e-003	5.9000e-004	2.0000e-005	6.0000e-004	0.0000	1.9737	1.9737	6.0000e-005	0.0000	1.9753
Total	**1.3900e-003**	**8.6000e-004**	**9.2400e-003**	**2.0000e-005**	**2.2000e-003**	**2.0000e-005**	**2.2200e-003**	**5.9000e-004**	**2.0000e-005**	**6.0000e-004**	**0.0000**	**1.9737**	**1.9737**	**6.0000e-005**	**0.0000**	**1.9753**

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	0.1259	0.4805	1.5512	3.8600e-003	0.3151	5.4300e-003	0.3205	0.0845	5.1200e-003	0.0897	0.0000	350.9483	350.9483	0.0137	0.0000	351.2908
Unmitigated	0.1259	0.4805	1.5512	3.8600e-003	0.3151	5.4300e-003	0.3205	0.0845	5.1200e-003	0.0897	0.0000	350.9483	350.9483	0.0137	0.0000	351.2908

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	282.41	282.41	282.41	824,493	824,493
Single Family Housing	9.52	9.91	8.62	27,062	27,062
Total	291.93	292.32	291.03	851,555	851,555

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
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3
Single Family Housing	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.503470	0.043416	0.226017	0.144790	0.038824	0.007695	0.015319	0.009013	0.001565	0.001250	0.005814	0.000843	0.001986
Unrefrigerated Warehouse-No Rail	0.503470	0.043416	0.226017	0.144790	0.038824	0.007695	0.015319	0.009013	0.001565	0.001250	0.005814	0.000843	0.001986
Single Family Housing	0.503470	0.043416	0.226017	0.144790	0.038824	0.007695	0.015319	0.009013	0.001565	0.001250	0.005814	0.000843	0.001986

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	2.5243	2.5243	1.1000e-004	2.0000e-005	2.5342
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.5243	2.5243	1.1000e-004	2.0000e-005	2.5342
NaturalGas Mitigated	7.0000e-005	5.6000e-004	2.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6466	0.6466	1.0000e-005	1.0000e-005	0.6504
NaturalGas Unmitigated	7.0000e-005	5.6000e-004	2.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6466	0.6466	1.0000e-005	1.0000e-005	0.6504

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					
Other Asphalt Surfaces	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
Single Family Housing	12116.5	7.0000e-005	5.6000e-004	2.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6466	0.6466	1.0000e-005	1.0000e-005	0.6504
Unrefrigerated Warehouse-No Rail	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		**7.0000e-005**	**5.6000e-004**	**2.4000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.6466**	**0.6466**	**1.0000e-005**	**1.0000e-005**	**0.6504**

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					
Other Asphalt Surfaces	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
Single Family Housing	12116.5	7.0000e-005	5.6000e-004	2.4000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.6466	0.6466	1.0000e-005	1.0000e-005	0.6504
Unrefrigerated Warehouse-No Rail	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		**7.0000e-005**	**5.6000e-004**	**2.4000e-004**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.6466**	**0.6466**	**1.0000e-005**	**1.0000e-005**	**0.6504**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	8677.22	2.5243	1.1000e-004	2.0000e-005	2.5342
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**2.5243**	**1.1000e-004**	**2.0000e-005**	**2.5342**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	8677.22	2.5243	1.1000e-004	2.0000e-005	2.5342
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**2.5243**	**1.1000e-004**	**2.0000e-005**	**2.5342**

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	tons/yr										MT/yr					
Mitigated	0.9411	1.3400e-003	0.0880	1.4000e-004		0.0109	0.0109		0.0109	0.0109	1.0330	0.4513	1.4843	9.8000e-004	8.0000e-005	1.5331
Unmitigated	0.9411	1.3400e-003	0.0880	1.4000e-004		0.0109	0.0109		0.0109	0.0109	1.0330	0.4513	1.4843	9.8000e-004	8.0000e-005	1.5331

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	0.2034					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6744					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0628	1.2300e-003	0.0775	1.4000e-004		0.0109	0.0109		0.0109	0.0109	1.0330	0.4332	1.4662	9.5000e-004	8.0000e-005	1.5142
Landscaping	5.2000e-004	1.2000e-004	0.0106	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0181	0.0181	3.0000e-005	0.0000	0.0188
Total	**0.9411**	**1.3500e-003**	**0.0880**	**1.4000e-004**		**0.0109**	**0.0109**		**0.0109**	**0.0109**	**1.0330**	**0.4513**	**1.4843**	**9.8000e-004**	**8.0000e-005**	**1.5331**

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	0.2034					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6744					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0628	1.2300e-003	0.0775	1.4000e-004		0.0109	0.0109		0.0109	0.0109	1.0330	0.4332	1.4662	9.5000e-004	8.0000e-005	1.5142
Landscaping	5.2000e-004	1.2000e-004	0.0106	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0181	0.0181	3.0000e-005	0.0000	0.0188
Total	**0.9411**	**1.3500e-003**	**0.0880**	**1.4000e-004**		**0.0109**	**0.0109**		**0.0109**	**0.0109**	**1.0330**	**0.4513**	**1.4843**	**9.8000e-004**	**8.0000e-005**	**1.5331**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	73.6887	1.2716	0.0305	114.5770
Unmitigated	73.6887	1.2716	0.0305	114.5770

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.065154 / 0.0410754	0.1651	2.1300e-003	5.0000e-005	0.2336
Unrefrigerated Warehouse-No Rail	38.8731 / 0	73.5237	1.2695	0.0305	114.3434
Total		**73.6887**	**1.2716**	**0.0305**	**114.5770**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.065154 / 0.0410754	0.1651	2.1300e-003	5.0000e-005	0.2336
Unrefrigerated Warehouse-No Rail	38.8731 / 0	73.5237	1.2695	0.0305	114.3434
Total		**73.6887**	**1.2716**	**0.0305**	**114.5770**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	32.2269	1.9046	0.0000	79.8407
Unmitigated	32.2269	1.9046	0.0000	79.8407

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.75	0.1522	9.0000e-003	0.0000	0.3772
Unrefrigerated Warehouse-No Rail	158.01	32.0746	1.8956	0.0000	79.4635
Total		**32.2268**	**1.9046**	**0.0000**	**79.8407**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	0.75	0.1522	9.0000e-003	0.0000	0.3772
Unrefrigerated Warehouse-No Rail	158.01	32.0746	1.8956	0.0000	79.4635
Total		**32.2268**	**1.9046**	**0.0000**	**79.8407**

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

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-11.8724	0.0000	0.0000	-11.8724

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	7.72 / 1.68	-26.0324	0.0000	0.0000	-26.0324
Total		**-26.0324**	**0.0000**	**0.0000**	**-26.0324**

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	20	14.1600	0.0000	0.0000	14.1600
Total		**14.1600**	**0.0000**	**0.0000**	**14.1600**