Biological Resources Assessment for the Ione Sands Moto-X Project

Amador County, California

Prepared For:

US Mine Corporation

July 24, 2017

EcoUrban Designs, Inc.

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1.0 INTRODUCTION

At the request of US Mine Corporation, EcoUrban Designs, Inc. has conducted a biological resources assessment for the proposed Ione Sands moto-X (Project) located in Amador County, California. The purpose of the assessment was to collect information on the biological resources present within the Project area, and to determine any potential biological constraints to Project activities.

1.1 Project Location

The ±162-acre Project site is located on Highway 124 located south of the City of Ione. The Project site corresponds to a portion of unsectioned land, Township 6 North, and Range 9 East (MDBM) of the Ione, California" 7.5-minute quadrangle (U.S. Department of the Interior, U.S. Geologic Survey [USGS] 1962)(Figure 1. *Project Location and Vicinity*). The approximate center of the Project site is located at 38° 19' 42.0276" North and 120° 56' 22.5888" West within the Upper Mokelumne Watershed (18040012, USGS 2015).

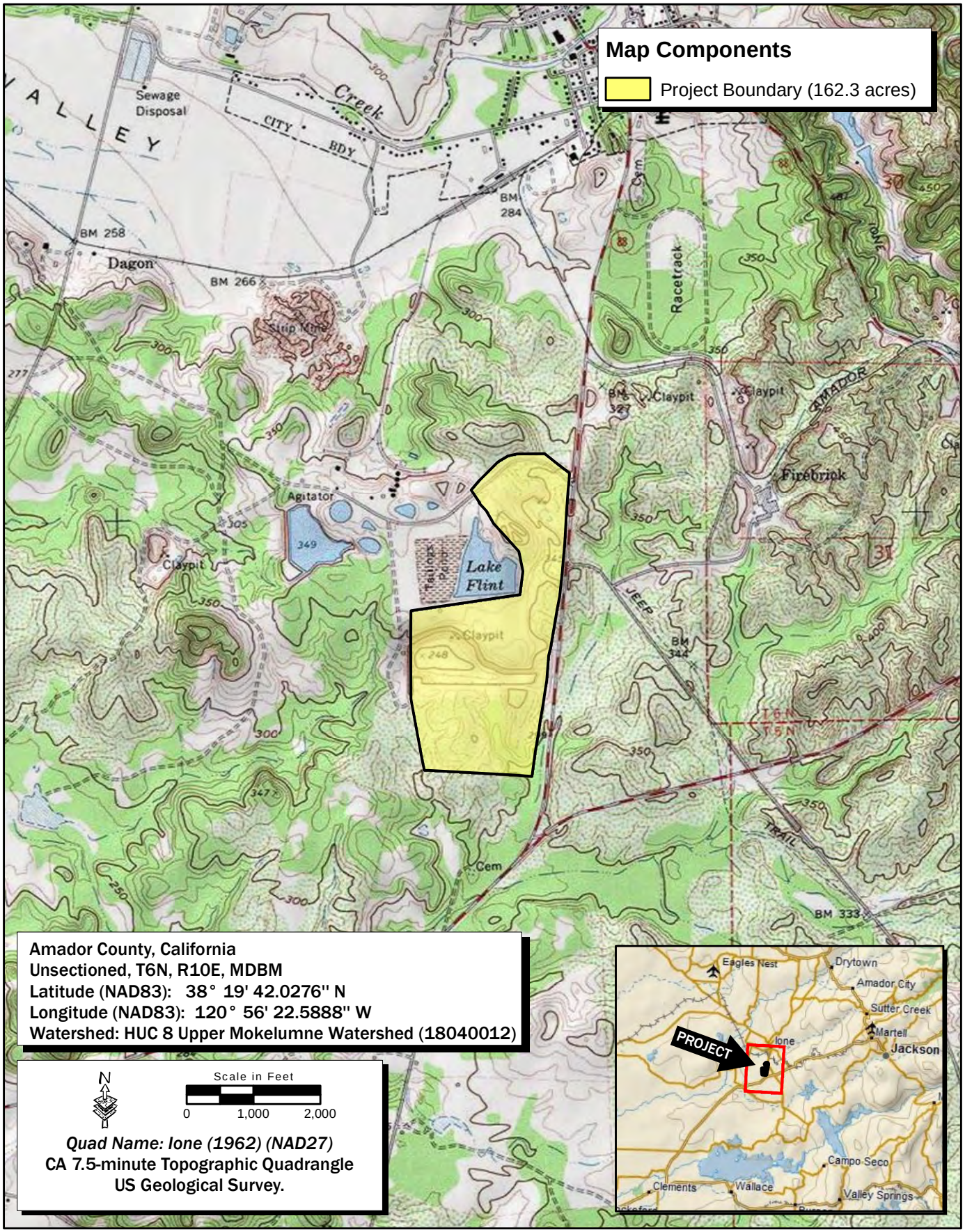
1.2 Methods

Prior to the field surveys, California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB, 2017) was searched. Since the site is in the central part of the USGS 7.5 minute Ione topographic quadrangle, the CNDDB search encompassed this quadrangle. This CNDDB search is approximately 120 miles surrounding the site.

The United States Fish and Wildlife Service (USFWS) list of Federally Threatened and Endangered species that may occur in or be affected by projects in the Ione topographic quadrangles (attached) was also reviewed. The purpose of this biological resource assessment (BRA) is to assess the potential for occurrence of special-status plant and animal species or their habitat, sensitive habitats such as wetlands within the Project site.

Field surveys were conducted on April 29, 2017. The surveys consisted of driving and walking throughout the site, making observations and noting habitat conditions, surrounding land uses, and plant and wildlife species. We conducted a search for jurisdictional Waters of the U.S. (a term that includes wetlands) as defined by the U.S. Army Corps of Engineers (USACE, 1987; 2017), sensitive species and suitable habitat for sensitive species (e.g., elderberry shrubs, vernal pools).

The BRA is prepared to support The Environmental Assessment pursuant to the National Environmental Policy Act and to support the USFWS consultation. The conclusions and recommendations presented in this BRA are based upon a review of the referenced documents and site reconnaissance. For this assessment, special-status species are defined as the following: are listed, proposed for listing, or candidates for future listing as threatened or endangered under the Federal Endangered Species Act (FESA); or are birds identified as birds of conservation concern by the U.S. Fish and Wildlife Service (USFWS).



Map Date: 7/16/2017 Service Layer Credits: Copyright ©2015 DeLorme

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Figure 1. Site and Vicinity

Ione Sands Moto-X

2.0 FEDERAL REGULATIONS

2.1 Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. FESA prohibits the "take" of endangered or threatened wildlife species. "Take" is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). "Harassment" is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

FESA and Clean Water Act (CWA) Section 404 guidelines prohibit the issuance of wetland permits for projects that jeopardize the continued existence of any endangered or threatened species or results in the destruction or adverse modification of habitat of such species. The U.S. Army Corps of Engineers (Corps) must consult with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) when threatened or endangered species under their jurisdiction may be affected by a proposed project. In the context of the proposed project, FESA would be initiated if development resulted in take of a threatened or endangered species or if issuance of a Section 404 permit or other federal agency action could result in take of an endangered species or adversely modify critical habitat of such a species. Under Section 7 of FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its Critical Habitat. Section 10 of FESA provides for issuance of incidental take permits where no other federal actions are necessary, provided a habitat conservation plan is developed.

2.2 Critical Habitat

Critical Habitat is defined in Section 3 of FESA as the specific areas within the geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. Critical habitat may also include areas that are not currently occupied by the species but will be needed for its recovery.

The physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

- Space for individual and population growth and for normal behavior;
- Cover or shelter;

- Food, water, air, light, minerals, or other nutritional or physiological requirements;
- Sites for breeding, reproduction, or rearing (or development) of offspring;
- Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species.

Excluded Essential Habitat is defined as areas that were found to be Essential Habitat for the survival of a species and assumed to contain at least one of the primary constituent elements for the species but were excluded from the Critical Habitat designation. The USFWS has stated that any action within the excluded Essential Habitat that triggers a federal nexus will be required to undergo the Section 7(a)(1) process, and the species covered under the specific Critical Habitat designation would be afforded protection under Section 7(a)(2) of FESA.

2.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties developed to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.4 Federal Clean Water Act

The U.S. Army Corp of Engineers is responsible for the federal Clean Water Act (CWA) under Section 404 to regulate the discharge of fill material into waters of the U.S. The purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b). In addition, any permanent extension of the limits of an existing water of the U.S., whether natural or man-made, results in a similar extension of USACE jurisdiction (33 CFR part 328.5). The U.S. Environmental Protection Agency also has authority over wetlands and may override a USACE permit.

Potential Waters of the U.S. and wetlands that cannot trace a continuous hydrologic connection to navigable waters of the U.S. are not tributary to waters of the U.S. They are termed "isolated wetlands." Isolated wetlands are jurisdictional when their destruction or degradation can affect interstate or foreign commerce (33 CFR Part 328[a]). The USACE may or may not take jurisdiction over isolated wetlands depending on the specific circumstances.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands

and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components such as, nest sites and a reliable source of water, for a wide variety of wildlife species.

The Project must obtain a Section 404 permit from the USACE before placing fill or grading in wetlands or waters of the U.S. prior to issuing the permit. The USACE is required to consult with the USFWS under Section 7 of the FESA if the project may affect federally listed species. In addition, if the Project proposed to fill wetlands or other waters of the U.S. must apply for a Section 401 water quality certification from the Reginal Water Quality Control Board (RWQCB). The RWQCB has adopted a policy requiring mitigation for any loss of wetland, streambed, or other jurisdictional area. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits.

3.0 METHODS

3.1 Literature Review

The following resources were reviewed to determine the special-status species that have been documented within or in the vicinity of the Project site or that otherwise have the potential to occur on-site:

- California Natural Diversity Database (CNDDB) data for the "Ione, California" 7.5-minute quadrangle and a 10-mile radius of the Project (California Department of Fish and Wildlife [CDFW] 2017)
- USFWS Information for Planning and Conservation Resource Report (USFWS, 2017)
- CNPS Inventory of Rare and Endangered Plants 9-quad Search (CDFW, 2017)
- Cornell Lab of Ornithology and National Audubon Society eBird data (Sullivan et al., 2009)

3.2 Site Reconnaissance

EcoUrban Designs, Inc. Senior Biologist John Williams conducted the site reconnaissance visit on April 29, 2017. The Project area was visually surveyed on foot using an eTrex GPS unit for navigation and resource mapping purposes, topographic maps, and aerial imagery. Special attention was given to identifying those portions of the Project site with the potential to support special-status species and sensitive habitats. During the field survey, biological communities occurring on-site were characterized and the following biological resource information was collected:

- Plants and animal species directly observed
- Burrows and any other special habitat features
- Wetlands and other aquatic features
- Representative site photographs

3.3 Special-Status Species Considered for the Project

Based on species occurrence information from the literature review and observations in the field, a list of federal special-status plant and animal species that have the potential to occur within the Project area was generated (Table 1). Each of these species potential to occur on-site was assessed based on the following criteria:

- **Present** - Species was observed during the site visit or is known to occur within the Project site based on documented occurrences within the CNDDB or other literature
- **Potential to Occur** - Habitat (including soils and elevation requirements) for the species occurs within the Project site
- **Low Potential to Occur** - Marginal or limited amounts of habitat occurs and/or the species is not known to occur within the vicinity of the Project site based on CNDDB records and other available documentation
- **Absent -** No suitable habitat (including soils and elevation requirements) and/or the species is not known to occur within the vicinity of the Project site based on CNDDB records and other documentation

Table 1. Species Identified During the Literature Search

Common Name	Scientific Name	Endangered Species Act Status		Other Status	Habitat Description	Approximate Survey Dates	Potential To Occur On-Site
		Federal	California				
Plants							
Bisbee peak rush-rose	Crocanthemum suffrutescens	-	-	3.2	Often gabbroic or lone soil often in burned or disturbed areas; found in chaparral. (255' – 2,200')	April-August	Low Potential - none observed during reconnaissance site visit
Big-scale balsamroot	Balsamorhiza macrolepis	-	-	1B.2	Sometimes in serpentinite soil, found in chaparral, cismontane woodland, valley and foothill grassland. (300' – 5,100')	March-June	Low Potential - none observed during reconnaissance site visit
Boggs Lake hedge-hyssop	Gratiola heterosepala	-	E	1B.2	Often clay soil found in marshes, swamps (lake margins) or vernal pools. (32' – 7,800')	April-August	Absent - no suitable habitat
Dwarf downingia	Downingia pusilla	-	-	2B.2	Valley and foothill grassland (mesic) or vernal pools. (3' – 1,500')	March-May	Absent - no suitable habitat
Hoover's calycadenia	Calycadenia hooveri	-	-	1B.3	Often rocky, cismontane woodland, valley and foothill grassland. (65' – 1,000')	July-September	Absent - no suitable habitat
Irish Hill buckwheat	Eriogonum apricum var. apricum	FE	E	1B.1	Found in chaparral (openings, lone soil). (300' – 400')	June-July	Low Potential - none observed during reconnaissance site visit
Ione Buckwheat	Eriogonum apricum var. apricum	FE	E	1B.1	Gabbroic or serpentinite soils in chaparral openings and cismontane woodland. (607' - 3,576')	April-July	Low Potential - none observed during reconnaissance site visit

Table 1. Species Identified During the Literature Search

Common Name	Scientific Name	Endangered Species Act Status		Other Status	Habitat Description	Approximate Survey Dates	Potential To Occur On-Site
		Federal	California				
Ione Manzanita	Arctostaphylos myrtifolia	FE	T	1B.2	Serpentine or gabbroic soils in chaparral and cismontane woodland. (804' - 2,067')	November-March	Potential - none observed during reconnaissance site visit
Jepson's coyote thistle	Eryngium jepsonii	-	-	1B.2	Found in clay, valley and foothill grassland or vernal pools. (10' – 1,000')	April-August	Absent - no suitable habitat
Legenere	Legenere limosa	-	-	1B.1	Found in vernal pools. (3' – 2,900')	April-June	Absent - no suitable habitat
Parry's horkelia	Horkelia parryi	-	-	1B.2	Often in Ione formation and other soils and found in chaparral or cismontane woodland. (262' – 3,500')	April-September	Low Potential - none observed during reconnaissance site visit
Patterson's navarretia	Navarretia paradoxiclara	-	-	1B.3	Serpentinite, openings, vernally mesic soils, often drainages and found in meadows and seeps. (500' – 1,400')	May-June	Absent - no suitable habitat
prairie wedge grass	Sphenopholis obtusata	-	-	2B.2	Often in mesic soils and found in cismontane woodland, meadows and seeps. (985' – 6,600')	April-July	Absent - no suitable habitat
Pincushion navarretia	Navarretia myersii ssp. Myersii	-	-	1B.1	often in acidic soils and found in vernal pools. (66' – 1,100')	April-May	Absent - no suitable habitat
Sacramento Orcutt grass	Orcuttia viscida	-	-	1B.1	Often in vernal pools. (100' – 330')	April-July	Absent - no suitable habitat
Sanford's arrowhead	Sagittaria sanfordii	-	-	1B.2	Often in marshes and swamps (assorted shallow freshwater). (0' – 2,100')	May-October	Absent - no suitable habitat
Stanislaus monkeyflower	Erythranthe marmorata	-	-	1B.1	Found in cismontane woodland and lower montane coniferous forest. (328' – 3,000')	March-May	Absent - no suitable habitat
Tuolumne button-celery	Eryngium pinnatisectum	-	-	1B.2	Often in mesic soils and found in cismontane woodland, lower montane coniferous forest, or vernal pools. (230' – 3,000')	May-August	Absent - no suitable habitat
Invertebrates							
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT	-	CSC	Elderberry shrubs (*Sambucus nigra* ssp. *caerulea)*	Any season	Low Potential - no elderberry shrubs observed during reconnaissance site visit
Rudolph's cave harvestman	*Banksula rudolphi*	-	-	CSC	Restricted to caves in limestone outcrop surrounded by serpentine	Not Applicable	Absent - no suitable habitat
Fish							
Steelhead (CA Central Valley ESU)	*Oncorhynchus mykiss*	FT	-	CSC	Undammed rivers, streams, creeks	Not Applicable	Absent - no suitable habitat
Delta smelt	*Hypomesus transpacificus*	FT	CE	-	Sacramento-San Joaquin delta	Not Applicable	Absent - no suitable habitat
Crustaceans							
Vernal Pool Fairy Spring	*Branchinecta lynchi*		T	CSC	Found in vernal pools	Winter	Absent - no suitable habitat

Table 1. Species Identified During the Literature Search

Common Name	Scientific Name	Endangered Species Act Status		Other Status	Habitat Description	Approximate Survey Dates	Potential To Occur On-Site
		Federal	California				
Amphibians							
California tiger salamander (Central California DPS)	*Ambystoma californiense*	FT	CT	CSC	Uses vernal pools, wetlands and adjacent grassland or oak woodland; needs underground refuge, usually ground squirrel or gopher burrows. Uses vernal pools, ponds, and seasonal wetlands for breeding. Largely terrestrial as adults.	March-May	Absent - no suitable habitat
California red-legged frog	*Rana draytonii*	FT	-	CSC	Found historically in the Coast Ranges from Mendocino County south to Baja California and inland from the northern Sacramento Valley to Sierra Nevada foothills, south to Tulare County. Currently occurs in lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Larvae require 11 to 20 weeks to transform, sometimes overwintering. Adults must have aestivation habitat to endure summer dry down.	May 1-November 1	Absent - no suitable habitat
Reptiles							
Western pond turtle	*Emys marmorata*	-	-	CSC	Varitey of habitats include rivers, streams, lakes, ponds, reservoirs, ephemeral shallow wetlands, gravel pits, stock ponds and sewage lagoons	Year-round	Absent - no suitable habitat
Birds							
Allen's Hummingbird	*Selasphorus sasins*			BCC, CSC	Coastal forest, scrub, and chaparral	Migrating	Absent - no suitable nesting habitat
Bald eagle (nesting and wintering)	*Haliaeetus leucocephalus*	Fd	CE	CFP, BCC	Typically breeds in forested areas near large bodies of water in the northern half of California; they nest in trees and rarely on cliffs usually absent of human disturbance; wintering habitat includes forest and woodland communities near waterbodies (e.g. rivers, lakes), wetlands, flooded agricultural fields, open grasslands	Nests (February-August)	Absent - no suitable nesting or foraging habitat
Black rail	*Laterallus jamaicensis*	-	CT	BCC, CFP	Salt marsh, shallow freshwater marsh, wet meadows, and flooded grassy vegetation. In California, primarily found in coastal and Bay-Delta communities, but also in Sierran foothills (Butte, Yuba, Nevada, Placer counties)	March-July	Absent - no suitable nesting habitat

Table 1. Species Identified During the Literature Search

Common Name	Scientific Name	Endangered Species Act Status		Other Status	Habitat Description	Approximate Survey Dates	Potential To Occur On-Site
		Federal	California				
Burrowing owl (burrow sites)	*Athene cunicularia*	-	-	BCC, CSC	Breeds in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g. prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds.	March-August	Absent - no suitable nesting habitat
Costa's hummingbird	*Calypte costae*	-	-	BCC	In California, breeds in coastal scrub and chaparral communities from Santa Barbara Co. south into Baja California; from Mexico north into Mojave desert scrub of Eastern Sierra Nevada;	February-July	Absent - no suitable nesting habitat
Fox sparrow	*Passerella iliaca*			BCC	Thickets and chaparral, scrubby, brushy woods and forest edges.	Winter	Absent - no suitable nesting habitat
Green-tailed towhee	*Melanerpes lewis*			BCC	Dense, shrubby habitat with scattered trees or cacti, sagebrush shrub-steppe.	Winter	Absent - no suitable nesting habitat
Lewis's woodpecker (nesting)	*Melanerpes lewis*	-	-	BCC	In California, breeds in Siskiyou and Modoc Counties, Warmer Mountains, Sierra Nevada, inner coast ranges from Tehama to San Luis Obispo Counties, San Bernardino Mountains, and Big Pine Mountain (Inyo Co.).; primary nesting habitats include open ponderosa pine forests, riparian woodland dominated by cottonwood, and logged or burned pin forest. Breeding widely associated with the distribution of ponderosa pine in western North America.	May-July	Absent - no suitable nesting habitat
Loggerhead shrike	*Lanius ludovicianus*	-	-	BCC, CSC	Found throughout California in open county with short vegetation, pastures, old orchards, grasslands, agricultural areas, open woodlands. Not found in heavily forested habitats.	March-July	Absent - no suitable nesting habitat
Long-billed curlew	*Nemenius americanus*			BCC	Sparse, short grasses, mixedgrass prairies, agricultural fields, wetlands, tidal estuaries, mudflats, flooded fields, occasionally beaches.	Winter	Absent - no suitable nesting habitat
Nuttall's woodpecker	*Picoides nuttallii*	-	-	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands.	April-July	Absent - no suitable nesting habitat
Oak titmouse	*Baelophus inornatus*	-	-	BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree)	March-July	Absent - no suitable nesting habitat

Table 1. Species Identified During the Literature Search

Common Name	Scientific Name	Endangered Species Act Status		Other Status	Habitat Description	Approximate Survey Dates	Potential To Occur On-Site
		Federal	California				
Olive-sided flycatcher	*Contopus cooperi*	-	-	BCC, CSC	Nests in montane and northern coniferous forests, in forest openings, forest edges, and semi open forest stands. In California, nests in coastal forests, Cascade and Sierra Nevada region. Winters in Central to South America.	May-August	Absent - no suitable nesting habitat
Peregrine falcon (nesting)	*Falco peregrinus*	Fd	Delisted	BCC, CFP	In California, breeds in coastal region, northern California, and Sierra Nevada. Nesting habitat includes cliff ledges and human-made ledges on towers and buildings. Wintering habitat includes areas where there are large concentrations of shorebirds, waterfowl, pigeons or doves.	October-March	Absent - no suitable nesting habitat
Prairie falcon	*Falco mexicanus*			BCC	Open country with bluffs and cliffs for nesting, alpine habitat, grasslands or alpine tundra for breeding	Year-round	Low Potential – potential foraging habitat; man-made ledges are present
Rufous hummingbird	*Selasphorus rufus*			BCC	Mountain meadows, coniferous or deciduous forest, thickets, swamps.	Migration	Absent - no suitable nesting
Short-eared owl	*Asio flammeus*			BCC	Open grasslands, prairies, hayfields, or stubble fields.	Winter	Absent - no suitable nesting
Snowy plover (nesting)	*Charadrius alexandrimus*	FT	-	BCC, CSC	Nests on the ground, on open sandy coastal beaches, barrier islands, barrens shores of inland saline lakes, on river bars, and man-made ponds such as wastewater ponds, dredge spoils, and salt evaporation ponds.	March-September	Absent - no suitable nesting habitat
Swainson's hawk	*Buteo swainsoni*			BCC	Native prairie, grassland habitat, crop or grazing lands, hay, alfalfa fields, pastures, grain crops, scattered stands of trees near grasslands.	March-August	Absent - no suitable nesting habitat
Tricolored blackbird	*Agelaius tricolor*			CSC	Vineyards, orchards, row crops, pastures, marshes, stands of cattails or bulrushes.	Year-round	Absent - no suitable nesting habitat
Western Grebe	*Aechmophorus occidentalis*			BCC	Freshwater lakes and marshes	March-August	Absent - no suitable nesting habitat
Williamson's sapsucker	*Sphyrapicus thyroideus*	-	-	BCC	In California, breeds in the Cascade-Sierra Nevada region; with disjunct breeding populations in San Gabriel, San Bernardino, and San Jacinto Mountains; Siskiyou, Trinity and Warner Mountains; East Warner Mountains, Sweetwater and Carson Range. Breeding occurs in middle to high elevation conifer and mixed conifer-deciduous forests. Nesting habitat cavities excavated in western larch, Douglas fir, ponderosa pine, montane spruce, and quaking aspen.	April-July	Absent - no suitable nesting habitat

Table 1. Species Identified During the Literature Search

Common Name	Scientific Name	Endangered Species Act Status		Other Status	Habitat Description	Approximate Survey Dates	Potential To Occur On-Site
		Federal	California				
Yellow-billed magpie (nesting)	*Pica nuttallii*	-	-	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County.; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings.	April-June	Absent - no suitable nesting habitat

Status Codes:

FE	- Federal ESA listed, Endangered.
FT	- Federal ESA listed, Threatened.
FPE	- Formally Proposed for federal ESA listing as Endangered.
Fd	- Formally Delisted (delisted species are monitored for 5 years).
BCC	- U. S. Fish and Wildlife Service Bird of Conservation Concern (USFWS, 2017)
CE	- California ESA or Native Plant Protection Act listed, Endangered.
CT	- California ESA or Native Plant Protection Act listed, Threatened.
CR	- California ESA or Native Plant Protection Act listed, Rare.
CC	- Candidate for California ESA listing as Endangered or Threatened.
CFP	- Fish and Game Code of California Fully Protected Species (§3511-birds, §4700-mammals, §5050-reptiles/amphibians).
CSC	- California Department of Fish and Wildlife Species of Special Concern.
1B.1	- California Rare Plant Rank/Rare or Endangered in California and elsewhere/seriously threatened in California
1B.2	- California Rare Plant Rank/Rare or Endangered in California and elsewhere/moderately threatened in California

4.0 RESULTS

4.1 Site Characteristics and Land Use

The Project is made up of Amador County Assessor Parcels APN 005160004000, 005160014000, 005160003000, 005160010000, 005130051000. The parcel is currently R1A (single family residential-agricultural district) / MRZ (mineral resource zone). The existing land use is reclaimed and vacant. The US Mine Corp will turn the mine spoils area into a motor cross race track. The existing onsite roads will be prepared with road base or crushed rock for stabilization. The race track is existing with mine spoils and sand. The parking area will be surfaced with compacted base over compacted clay. No permanent surfacing of roads will occur.

Land uses in surrounding areas are primarily rangeland and open space, with scattered industrial parcels and mines. The surrounding parcels have similar habitats of chaparral and mixed oak and pine woodlands. There are areas to the west and to the southeast that are open water.

4.2 Vegetation Communities

The site was observed to be highly disturbed due to historic industrial activities and distribution of mine spoils. A majority of the Project site consists of flat open areas that are being colonized by a mostly non-native mix of forbs and grass. In these areas the dominant herbaceous species which included: hairy vetch (*Vicia villosa*), common vetch (*Vicia sativa*), Italian ryegrass (*Lolium multiflorum*), birdfoot trefoil (*Lotus corniculatus*), annual yellow sweetclover (*Melilotus indica*), rose clover (*Trifolium hirtum*), red brome (*Bromus madritensis subsp. rubens*), ripgut grass (Bromus

diandrus), Italian thistle (*Carduus pycnocephalus*), slender wild oat (*Avena barbata*), oat species (*Avena* sp.), and small quaking grass (*Briza minor*). On the less recently disturbed upland areas there are many native shrub and tree species represented on the Project site. The shrubs included: whiteleaf manzinata (Arctostaphylos viscida), coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), chamise (Adenostoma fasciculatum), yerba santa (*Eriodictyon californicum*), poison oak (*Toxicodendron diversilobum*), and non-native Himalayan blackberry (*Rubus discolor*). The tree species in these area included: foothill pine (*Pinus sabiniana*), ponderosa pine (*Pinus ponderosa*), and interior live oak (*Quercus wislizeni var wislizeni*). The wetland areas on the Project site (seasonal wetlands, depressional wetlands, pond and drainage areas) are dominated by mostly riparian species which included: iris-leaf rush (*Juncus xiphioides*), Baltic rush (Juncus balticus), tall flatsedge (Cyperus eragrostis), slender rush (*Juncus tenuis*), toad rush (*Juncus bufonius*), saltgrass (*Distichlis spicata*), smartweed (*Persicaria* sp.), curly dock (*Rumex crispus*), long-beak hawkbit (*Leontodon saxatilis*), cattail (*Typha sp*) and pampas grass (*Cortaderia selloana*). Trees found in and around these areas included: arroyo willow (*Salix lasiolepis*), sandbar willow (*Salix exigua*), and Fremont cottonwood (*Populus fremontii subsp. fremontii*).

4.3 Soils

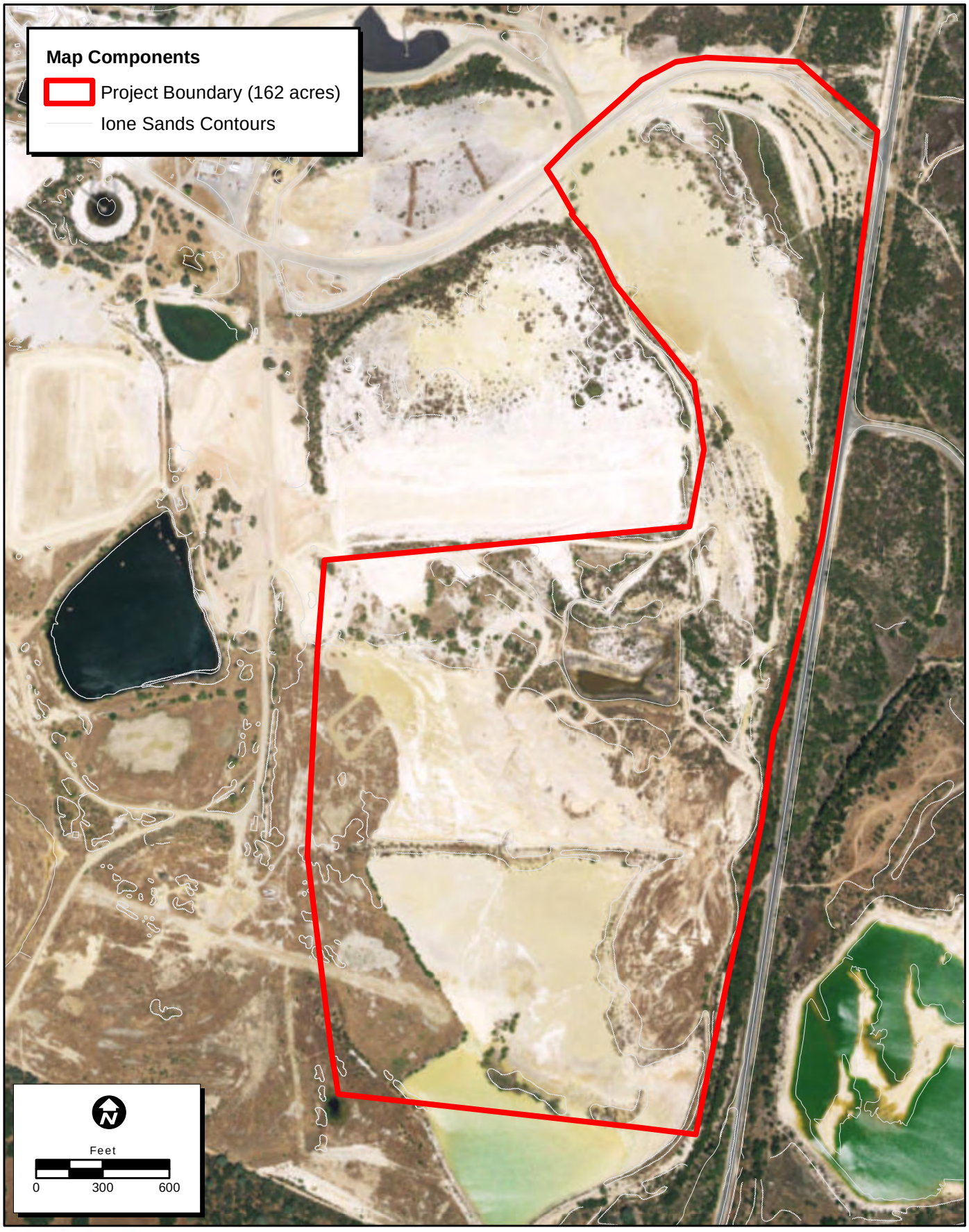
According to the *SSURGO data* (NRCS, 2017) and the Web Soil Survey (NRCS, 2017), one soil unit, or type, have been mapped within the Project site (Figure 3. *Natural Resources Conservation Service Soil Types*). Sedimentary Rock Land (Sa) consists of exposed sandstone and of clayey marine sediments. These soil units are not considered hydric (NRCS, 2017).

4.3.1 Sedimentary Rock Land (Sa)

This miscellaneous land type consists of areas of exposed sandstone and of clayey marine sediments that in places have a thin mantle of gravelly, pale-brown to reddish-brown soil material on them. The soil material contains numerous quartz pebbles and fragments of lateritic iron. This land type is rolling to steep. Sedimentary rock land is extremely acid and very low in fertility. It has little value for agriculture except as protected watershed or as wildlife areas. Clay and silica sand are mined commercially from large areas of this unit. Deposits of soft coal are mined for the manufacture of wax and other products.

4.3.1 Mokelumne soils and Alluvial Land (Mt)

The Mokelumne sandy loam, 2 to 5 percent slopes is formed in material from old sandstone and clayey marine sediments. Alluvial land is made up of recent alluvium from these sediments and from sedimentary rock land. The Mokelumne soils and Alluvial land occur together in a complicated pattern. Generally, the Mokelumne soils are on lower foot slopes of dissected terraces and are hummocky in places, and Alluvial land is on stream terraces and flood plains. Alluvial land is mostly of well drained to moderately well drained. It is medium acid to strongly acid and is low in fertility. The available water holding capacity is moderate to low, root penetration is moderately deep to shallow, and fertility is very low. Runoff is slow to rapid, and the erosion hazard is moderate to severe. Water remains on the surface during the rainy season, and the soil remains seasonally wet for long periods.

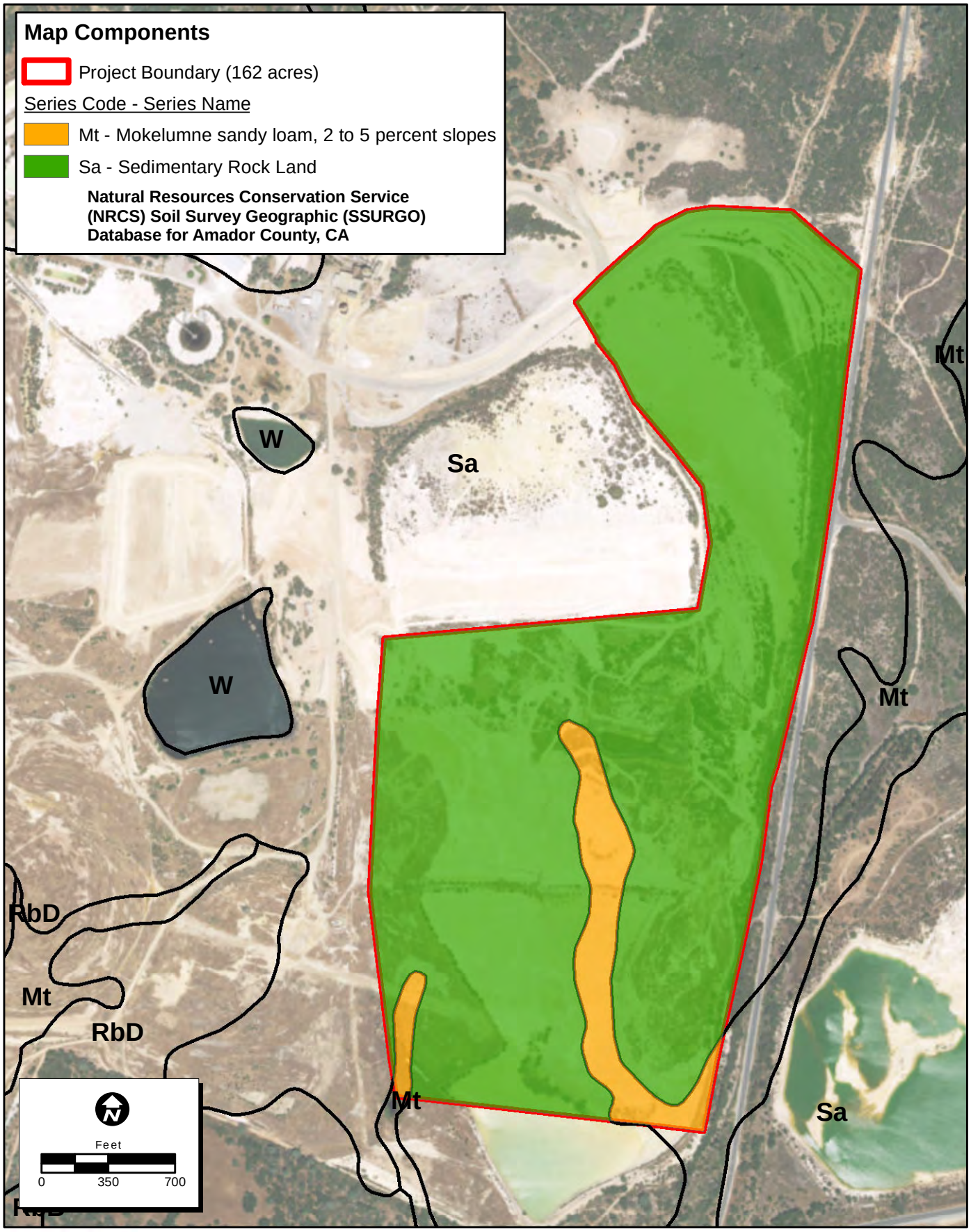


Map Date: 7/6/2017 Base Photo: USDA NAIP 2016

EcoUrban Designs, Inc.

Figure 2. Project Location

Ione Sands Moto-X



Map Date: 6/26/2017 Base Photo: NAIP 2016

EcoUrban Designs, Inc.

Figure 3. Natural Resources Conservation Service Soils Type

Ione Sands Moto-X

4.4 Potential Waters of the U.S.

There are potential jurisdictional waters of the U.S. and wetlands on the Project site (Figure 4 and attached photographs). The potential jurisdictional waters of the U.S. and wetlands include six seasonal wetlands, a large pond, and two drainage ditches.

All of the wetlands on the site are located in topographic basins. Review of the USGS topographic map (Figure 2) shows that there are no mapped drainages in or near the site. Although the onsite wetlands meet the technical criteria of wetlands (i.e., they have wetland hydrology, vegetation and soils), they are believed to be non-jurisdictional due to geographical and hydrologic isolation from other surface waters and absence of a connection to interstate or foreign commerce.

4.4.1 Drainage Ditch

There is one large drainage that moves through the middle of the Project site and small disconnected drainages on the eastern side of Project site. The drainages are highly erodible and carrying stormwater runoff away from the abandoned mine spoils. The drainage ditches were located in highly erodible soils that showed edge and bank from stormwater events. At the time of the survey they were dry and were sparsely vegetated. The dominant vegetation includes: long-beaked hawkbit (*Leontodon saxatilis*), Italian rye grass (*Lolium multiflorum*), foxtail barley (*Hordeum jubatum*), saltgrass (*Distichlis spicata*), smartweed (*Persicaria* sp.), and rushes (*Juncus* sp.) along the edges.

4.4.2 Seasonal Wetland

The six seasonal wetlands are found across the project site. The seasonal wetlands are shallow depressional features in highly erodible soil from mine spoils. During heavy rain events, the runoff from the existing site drains across the site across highly erodible soils. This area is highly disturbed and low areas hold water creating the seasonal wetlands.

The dominant vegetation includes: iris-leaf rush (*Juncus xiphoides*), Baltic rush (*Juncus balticus*), tall flatsedge (*Cyperus eragrostis*), toad rush (*Juncus bufonius*), saltgrass (*Distichlis spicata*), smartweed (*Persicaria* sp.), curly dock (*Rumex crispus*) and pampas grass (*Cortaderia selloana*).

4.4.3 Pond

There is one pond on the Project site. The pond is located in central area of the site is a permeant feature that supports aquatic life year-round. The dominant vegetation includes: arroyo willow (*Salix lasiolepis*), smartweed (*Persicaria sp.*), Fremont cottonwood (*Populus fremontii subsp. fremontii*), Baltic rush (*Juncus balticus*), curly dock (*Rumex crispus*), tall flatsedge (*Cyperus eragrastis*), and iris-leaf rush *(Juncus xiphoides*), saltgrass (*Distichlis spicata*), and cattail (*Typha spp.*).

4.5 Wildlife

Habitats within the Project site are likely to support a variety of common wildlife species. A variety of wildlife species were observed during the 2017 surveys, all of these are common species of the

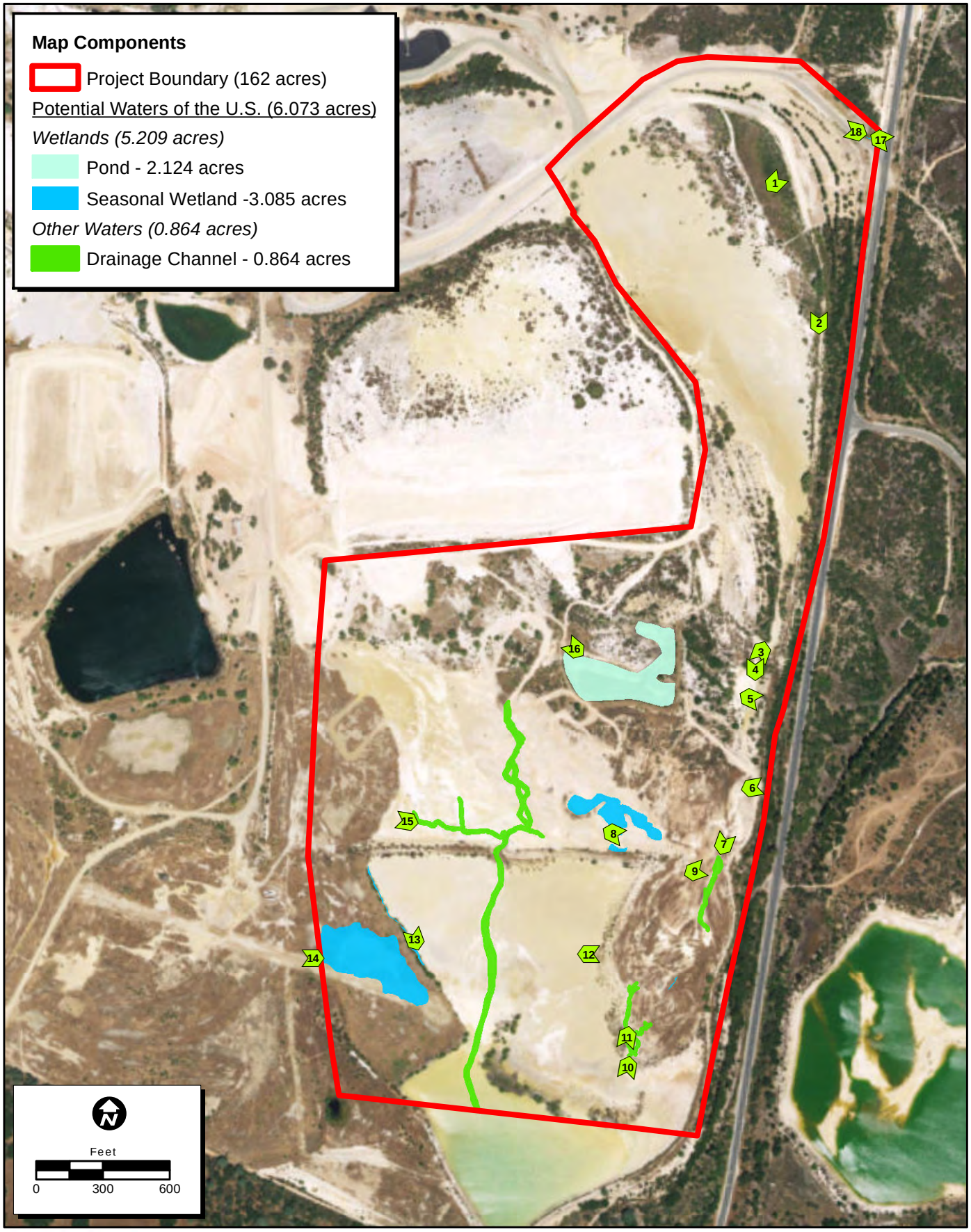
central Sierra foothills. Bird observed during the field survey included yellow warbler (*Setophaga petechia*), red-winged blackbird (*Agelaius phoeniceus*), California gull (*Larus californicus*), common mallard (*Anas platyrhynchos*), Canada goose (*Branta canadensis*), Osprey (*Pandion haliaetus*), American coot (*Fulica americana*), Rock pigeon (*Fulica americana*), red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura*), barn swallow (*Hirundo rustica*), western kingbird (*Tyrannus verticalis*), common raven (*Corvus corax*), turkey vulture (*Cathartes aura*), and killdeer (*Charadrius vociferus*). Given the thick shrub community, it is likely a variety of songbirds would nest on this site.

Other wildlife species found on-site western gray squirrel (*Sciurus griseus*). There was evidence of coyote (*Canis latrans*), black-tailed jack rabbits (*Lepus L. californicus*) and black-tailed deer(*Odocoileus hemionus*) actively using the site. It is likely raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*) and Virginia opossum (*Didelphis virginians*) occur on the Project site.

Based on the type of habitat on the Project site, a number of amphibians and reptiles are expected to occur on-site. Reptiles observed include western fence lizard (*Sceloporus occidentalis*).

4.6 Evaluation of Species Identified in the Literature Search

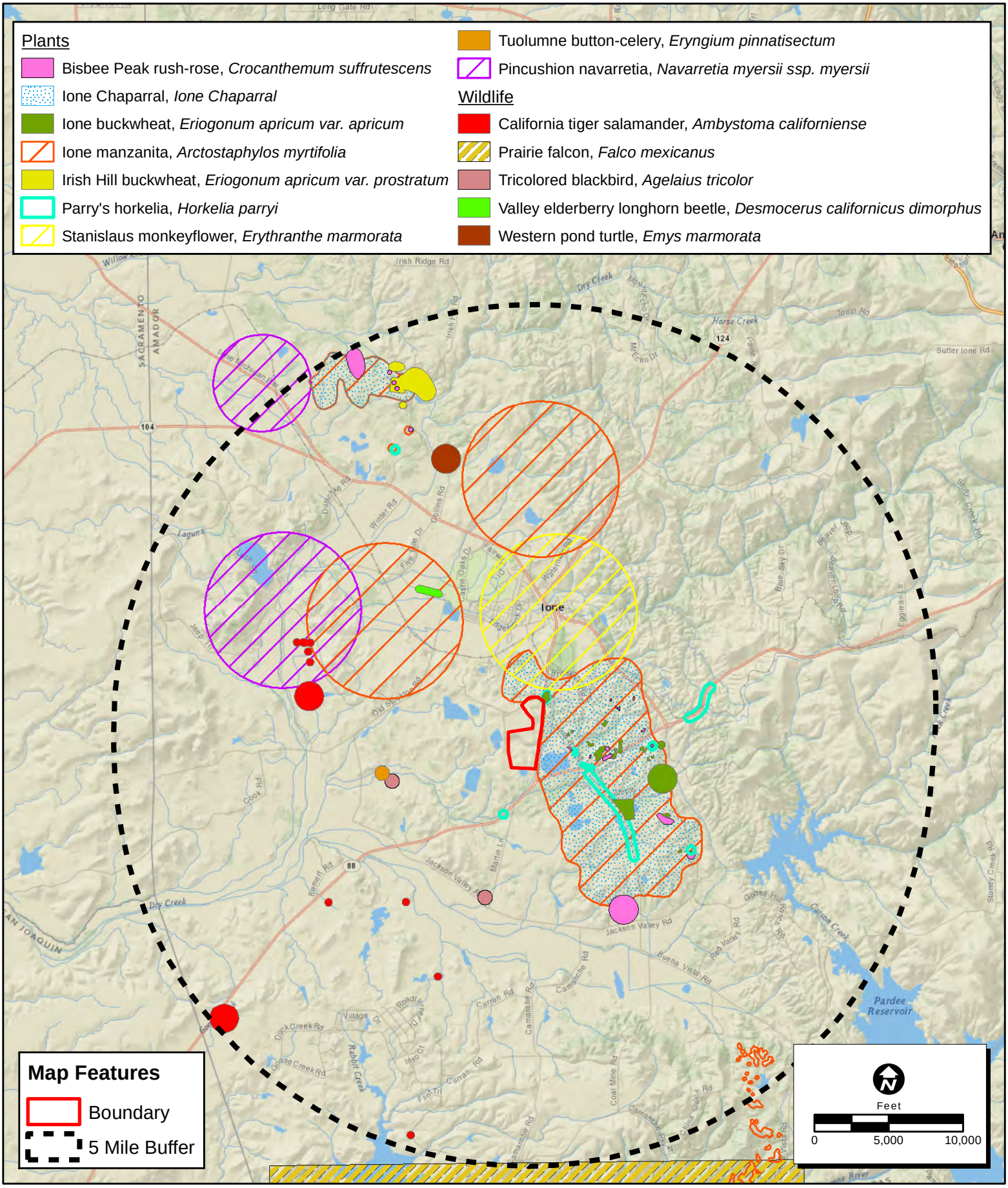
According to the CNDDB, there are thirteen documented occurrences of special-status species within a five-mile search around the Project site (CDFW, 2017). No special-status species occurrences have been documented on the Project site (Figure 5. *California Natural Diversity Database (CNDDB) Occurrences of Federally Listed Special-Status Species*).



Map Date: 7/13/2017 Base Photo: USDA NAIP 2016

Figure 4. Preliminary Wetlands and Special-Status Species

Ione Sands Moto-X



Map Date: 7/16/2017 Base Photo: National Geographic World Map

EcoUrban Designs, Inc.

Figure 5.
CNDDB Special-Status Species

Ione Sands Moto-X

A list of potentially occurring special-status plant and animal species was developed based on the literature search and habitats present on-site (Table 1. *Species Identified during the Literature Search*). Included in this table are the listing status for each species, a brief habitat description, and a determination on the potential to occur on-site.

4.6.1 Plants

There are no special-status plant species identified as occurring within the Project (see Figure 4). However, if during construction a special-status plants should be discovered, it should be avoided to the extent feasible. If the plants cannot be avoided, a mitigation plan should be prepared in consultation with the CDFW. At minimum, the mitigation plan should include locations where the plants will be transplanted in suitable habitat adjacent to the Project site, along with success criteria, and monitoring activities. The CDFW would need to approve the mitigation plan prior to transplantation and commencement of construction activities.

Ione Buckwheat

Ione buckwheat is a rare plant endemic to the Sierra Nevada foothills of California, where it is known to occur in Amador County. It is listed as state and federally listed as endangered and is a CNPS List 1B species, which means it is rare, threatened, or endangered in California (CNPS, 2017). No plants were observed within the Project site during the 2017 survey. The CNDDB (2017) shows Ione buckwheat less than 2 miles from the Project site.

Ione Manzanita

Ione manzanita is a federally threatened shrub occurring in Amador and Calaveras counties, almost always on Ione formation soils. The Ione manzanita was not observed during the surveys; however, the site was overgrown and the shrub could have been missed in areas we could not thoroughly survey. The CNDDB (2017) shows Ione manzanita less than 2 miles from the Project site.

Parry's horkelia

Parry's horkelia occurs in chaparral and cismontane woodland vegetation, almost always on Ione formation soils. It is not listed as either the state or federal level, but is a CNPS List 1B species, which means it is rare, threatened, or endangered in California and elsewhere (CNPS, 2017). No plants were observed within the Project site and within the Project alignment during the 2017 survey. The CNBBD (2017) contains an occurrence a half-mile from the Project site.

4.6.2 Invertebrates

Based on the literature review, Valley elderberry longhorn beetle (VELB, *Desmocerus californicus dimorphus*) could occur within the Project; however, it was not observed and has low potential to occur within the Project site (Table 1) without the presence of elderberry shrubs (*Sambucus nigra* ssp. *caerulea*). No elderberry shrubs were observed during the reconnaissance site visit.

Valley Elderberry Longhorn Beetle

The VELB was listed as a threatened species pursuant to FESA on 8 August 1980 (USFWS, 1980). In 2006, the USFWS released a status review in which it was determined this species is no longer in danger of extinction and recommended that the beetle be delisted (USFWS, 2006). However, the USFWS is required to undertake a separate rule-making process in order to implement formal changes in the status of a listed species; thus, to date, the beetle remains protected under FESA.

The VELB is completely dependent on its host plant, the elderberry shrub, which typically occurs in riparian and other woodland communities in California's Central Valley and associated foothills (USFWS, 1999). Elderberry plants with one or more stems measuring one inch or greater in diameter at ground level, and that are located within the range of VELB, are considered habitat for the species (USFWS, 1999). The adult VELB flight season extends from late March through June. During that time, adults feed on foliage and flowers, mate, and females lay eggs on living elderberry plants (Barr, 1991). After hatching, VELB larvae bore into live elderberry stems, where they develop for one to two years while feeding on the pith. The final larval stage creates an emergence hole in the stem and then plugs the hole, remaining within the stem through pupation. Following pupation, the adult beetle emerges from the previously-created emergence hole and completes its life cycle.

VELB has been documented less than 2 miles northwest of the Project site in the CNDDB (CDFW, 2017).

4.6.3 Fish

There is no potential habitat for special-status fish on the Project site.

4.6.4 Amphibians

No special-status amphibian, such as California tiger salamander (CTS) are expected to be identified as having potential to occur within the Project site based on the literature review and a site

California Tiger Salamander

The CTS is a CDFW Species of Special Concern and is listed as threatened by the USFWS under the FESA. CTS require stock ponds without game fish or deep, large vernal pools, which hold water well into the spring (April or May) for breeding (Jennings and Hayes, 1994). From breeding, the young disperse across upland habitats up to the 1+/- mile from the breeding ponds and spend the summer months in subterranean refugia such as small mammals burrows; however, most salamanders aestivate in burrows within 0.25 miles of their breeding ponds. Relatively deeper vernal pools and seasonal stock ponds serve as potential breeding habitat for this species and nearby grasslands and woodland habitats with burrows and cracks are used for over-summering.

The lack of onsite woodlands and grasslands reduce the likeliness of burrows and cracks for potentially suitable CTS over-summering, and there are no breeding ponds nearby. Therefore, there is no highly suitable CTS breeding habitat on the site such as large deep vernal pools or seasonal stockponds. The seasonal wetlands on the site are much too small, shallow, and ephemeral to

support a hydrologic regime that would allow successful breeding for CTS. The wetlands may have a marginally appropriate hydrologic regime during some years, but CTS are not known to use this type of wetlands for breeding. The water quality in the mine runoff water appears unsuitable for all aquatic life. Due to a lack of suitable breeding habitat on the site and lack of occurrences in the greater project vicinity, the likelihood of CTS over-summering on the site is considered extremely unlikely. The nearest occurrence of CTS is an isolated population less than 3 miles to the northwest of the Project (CNDDB, 2017).

4.6.5 Reptiles

Based on the literature review and the site reconnaissance survey, there are no special-status reptile species identified as having potential to occur within the Project area; however, the western pond turtle occurs within 5 miles of the site.

Western Pond Turtle

The perennial and intermittent drainages and riparian habitat provide habitat for western pond turtle. There are no drainages or riparian habitat found within the Project site. This species has low potential of occurring on the project site. The nearest occurrence of the western pond turtle is an isolated population approximately 3 miles to the northwest of the Project (CNDDB, 2017).

4.6.6 Birds

Based on the literature review one of the special-status bird species were identified as having potential to occur within the Project site (Table 1). Upon further analysis and after the reconnaissance site visit, the other species are absent from the Project site due to the lack of suitable habitat or the distance from the known breeding range of the species. No further discussion of these species are provided in this analysis. A brief description of the remaining special-status bird species that have the potential to occur within the Project area is presented below.

Prairie Falcon

The prairie falcon is located in open grassland and woodland habitats. This species is identified by the USFWS as a species of conservation concern. There is low potential of this species occurring on the project due to the process plant activities and the general disturbance to the habitat on the Project site. However, there are raptor perches in the meadow portion of the site.

4.6.7 Mammals

Based on the literature review and the site reconnaissance survey, there are no federal special-status mammal species identified as having potential to occur within the Project area.

4.6.8 Wildlife Movement/Corridors

The Project site is located in a chaparral landscape. There is no evidence of a riparian corridor to support animal movements within the Project.

5.0 RECOMMENDATIONS

5.1 Waters of the U.S.

There are potential jurisdictional waters of the U.S. and wetlands on the Project site (Figure 4 and attached photographs). The potential jurisdictional waters of the U.S. and wetlands include a few seasonal wetlands, a drainage ditch, and a pond. A jurisdictional wetland delineation survey is recommended.

5.2 Special-Status Plants

There were no occurrences of special-status plants during the 2017 survey. However, during construction if a special-status plants should be found, it should be avoided to the extent feasible. If the plants cannot be avoided, a mitigation plan should be prepared in consultation with the CDFW. At minimum, the mitigation plan should include locations where the plants will be transplanted in suitable habitat adjacent to the Project site, along with success criteria, and monitoring activities. The CDFW would need to approve the mitigation plan prior to transplantation and commencement of construction activities.

5.3 Special-Status Invertebrates

The valley elderberry longhorn beetle (VELB) has been documented less than 2 miles northwest of the Project site in the CNDDB (CDFW, 2017) and low potential to occur on the Project site due to lack of elderberry shrubs. It is recommended to perform a presence/absence elderberry shrub survey according to USFWS (1999) protocol.

According to the USFWS Conservation Guidelines for Valley Elderberry Longhorn Beetle (Guidelines) (USFWS, 1999), encroachment within 100 feet from elderberry shrubs with stems measuring at least one inch DGL must be approved by the USFWS and a minimum setback of 20 feet from the driplines of the elderberry shrubs must be maintained. Therefore, the project should be designed to avoid construction activities within 20 feet of the elderberry shrubs. If this is feasible, high visibility construction fencing should be erected at the edge of the construction footprint at a minimum of 20 from the elderberry shrubs.

Project activities that will encroach into the 20-foot minimum setback area are assumed to adversely affect VELB. Therefore, if work is anticipated to occur within 20 feet of the elderberry shrubs, the client should initiate formal Section 7 consultation with the USFWS to determine whether the project would adversely affect the species. If the project would remove the elderberry shrubs, a biological opinion with an incidental take statement must be obtained from the USFWS prior to construction. Project activities that that may directly or indirectly affect elderberry shrubs with stems measuring at least one inch DGL require minimization measures including planting replacement habitat or purchasing mitigation credits from a USFWS-approved mitigation bank. The mitigation ratios vary based on whether exit holes are present and whether the shrubs occur within riparian habitat.

- Construction contractors shall be briefed on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.
- Work crews shall be instructed about the status of the beetle and the need to protect its elderberry host plant.
- No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant shall be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.
- Mowing of grasses/ground cover shall occur only from July through April to reduce fire hazard. No mowing shall occur closer than five feet to elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., avoid stripping away bark through careless use of mowing/trimming equipment).
- In cases where removal of elderberry shrubs or their stems measuring one inch or greater (removal or trimming) is unavoidable, these impacts shall be compensated for by salvaging and planting the affected elderberry shrubs and planting additional elderberry shrubs and associated native riparian plants. Mitigation planting shall occur, to the maximum extent practicable, in areas adjacent to the impact area and/or located to fill in existing gaps in riparian corridors.

5.4 Special-Status Fish

There are no potentially occurring federal special-status fish for the Project. Therefore, no additional measures are recommended.

5.5 Special-Status Amphibians

Suitable habitat is not present onsite for the two federal special-status amphibian species, the CRLF and CTS. There is no aquatic habitat within the proposed Project site.

5.6 Special-Status Reptiles

Suitable habitat is not present onsite for one federal special-status amphibian species, the western pond turtle. There is no aquatic habitat within the proposed Project site.

5.7 Special-Status Birds and MBTA Protected Birds (including Raptors)

Suitable nesting habitat for one special-status birds has low potential to be present within the Project site, the prairie falcon. If present, the Project could result in harassment to nesting individuals and may temporarily disrupt foraging activities.

In addition to the above listed special-status birds, all native birds, including raptors, are protected under the federal MBTA. As such, to ensure that there are no impacts to protected active nests, the following mitigation measures are recommended:

- Conduct a pre-construction nesting bird survey of all suitable habitats on the project within 14 days prior to the commencement of construction during the nesting season (February 1-August 31).

- If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a qualified biologist in consultation with the CDFW and/or USFWS. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Pre-construction nesting surveys are not required for construction activity that begins outside the nesting season.

5.8 Special-Status Mammals

There are no potentially occurring federal special-status mammals for the Project. Therefore, no additional measures are recommended.

6.0 CONCLUSIONS AND RECOMMENDATIONS

- The site consists of chaparral, mixed oak and pine woodland, dirt roads, and graded areas.

- Development will involve adding a truck route made of crushed rock which will involve the removal of vegetation and shrubs. Depending on the number of trees removed, the loss of oaks may be determined to be significant impact by the County. In the event that removal of oaks is deemed a significant impact, mitigation for impacts to oak resources should be consistent with County policy, which may involve preservation, replacement plantings, or other actions.

- Potential jurisdictional Waters of the U.S. and wetlands on the site are limited to a few seasonal wetlands, a pond, and a large drainage ditch. The jurisdictional status of these features has not been established and they are believed to be non-jurisdictional due to geographical and hydrologic isolation from other surface waters and absence of a connection to interstate or foreign commerce.

- Since the jurisdictional status of the onsite wetlands has not been confirmed by USACE, compete avoidance is conservatively recommended to ensure compliance with wetland laws. If complete avoidance of potential jurisdictional Waters of the U.S. or wetlands is not practicable, a wetland delineation should be prepared and submitted to USACE for verification in order to determine the jurisdictional or non-jurisdictional nature of the seasonal wetlands and man-made drainage ditch. If jurisdictional areas will be impacted, wetland permits/and or certification should be obtained from USACE, CDFW, and the RWQCB prior to placement of any fill (e.g., a culvert, fill slope, rock) within potential Waters of the U.S.

- Special-status plant populations should be avoided to the maximum extent practicable. If complete avoidance is infeasible, project impacts will need to be quantified and mitigation

developed to reduce the impacts to a less-than-significant level. Mitigation may include preservation and enhancement of on and/or off-site populations, transplanting individual plants to preservation area, or other actions, subjects to the approval of the County, CDFW, and USFWS.

- Intensive use of onsite habitats by special-status wildlife species is unlikely due to lack of suitable habitat.
- Onsite trees and shrubs could be used by birds protected by Migratory Bird Treaty Act of 1918. Any vegetation clearing should be schedule outside of the avian nesting season (February 1 through August 31) or survey should be conducted immediately prior to vegetation removal. If active nests are found, vegetation removal should be delayed until the young fledge.

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Photo 1: Looking west across motorcross area. Sparsely vegetated. Dominant vegetation: black mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*), hairy vetch (*Vicia villosa*) and foxtail barley (*Hordeum jubatum*).

Photo 2: Looking south along dirt road. Sparsely vegetated. Dominant vegetation: Interior live oak (*Quercus wislizeni var wislizeni*), yerba santa (*Eriodictyon californicum*), coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), and whiteleaf manzanita (*Arctostaphylos viscida*).

Photo Date: April 29, 2017

Photo 3: Looking northeast at culvert under road. Signs of sediment deposition from upslope mine spoils. Dominant vegetation: sandbar willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), whiteleaf manzanita (*Arctostaphylos viscida*), yerba santa (*Eriodictyon californicum*), toyon (*Heteromeles arbutifolia*), coyote brush (*Baccharis pilularis*), interior live oak (*Quercus wislizeni var wislizeni*), chamise (*Adenostoma fasciculatum*), Ponderosa pine (*Pinus ponderosa*), Himalayan blackberry (*Rubus discolor*).

Photo 4: Looking south along washout area below culvert. Area was mine refuse deposits with evidence of erosion and sediment moving in rain events. Dominant vegetation: Fremont Cottonwood (*Populus fremontii subsp. fremontii*), sandbar willow (*Salix exigua*), arroyo willow (*Salix lasiolepis*), whiteleaf manzanita (*Arctostaphylos viscida*), yerba santa (*Eriodictyon californicum*), toyon (Heteromeles arbutifolia), coyote brush (*Baccharis pilularis*) , interior live oak (Quercus wislizeni var wislizeni), and chamise (*Adenostoma fasciculatum*).

Photo 5: Looking northwest upslope. Dominant vegetation: foothill pine (*Pinus sabiniana*), ponderosa pine (*Pinus ponderosa*), Interior live oak (*Quercus wislizeni var wislizeni*), whiteleaf manzinata (*Arctostaphylos viscida*), coyote brush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), chamise (*Adenostoma fasciculatum*), Italian ryegrass (*Lolium multiflorum*) and red brome (*Bromus madritensis subsp. rubens*).

Photos 6: Looking west across the meadow. Dominant vegetation: whiteleaf manzinata (*B183*), Italian ryegrass (*Lolium multiflorum*), hairy vetch(*Vicia villosa*), common vetch (*Vicia sativa*), long-beaked hawkbit (*Leontodon saxatilis*), small quaking grass (*Briza minor*), foxtain barley (*Hordeum jubatum*), rose clover (*Trifolium hirtum*), and red-stem filaree (*Erodium cicutarium*)

Photo 7: Looking south along unvegetated drainage channel. Highly disturbed area of mining spoils. Dominant species along edge of channel includes: long-beaked hawkbit (*Leontodon saxatilis*), Italian rye grass (*Lolium multiflorum*), and foxtail barley (*Hordeum jubatum*).

Photos 8: Looking northwest at shallow depressional seasonal wetland with mine spoils in the area. Dominant vegetation: Iris-leaf rush (*Juncus xiphoides*), Baltic rush (*Juncus balticus*) , tall flatsedge (*Cyperus eragrostis*), pampas grass (*Cortaderia selloana*) , whiteleaf manzanita (*Arctostaphylos viscida*), chamise (*Adenostoma fasciculatum*), and Interior live oak (*Quercus wislizeni var wislizeni*).

Photo 9: Looking across the meadow. This area has raptor perches and bird houses. Dominant vegetation: hairy vetch (*Vicia villosa*), common vetch (*Vicia sativa*) , long-beaked hawkbit (*Leontodon saxatilis*), birdfoot trefoil (*Lotus corniculatus*), annual yellow sweetclover (*Melilotus indica*), rose clover (Trifolium hirtum), red brome (*Bromus madritensis subsp. rubens*), ripgut grass (*Bromus diandrus*).

Photos 10: Looking north (check this) at unvegetated drainage channel. Dominant vegetation along edge of channel: rose clover (*Trifolium hirtum*), Italian ryegrass (*Lolium multiflorum*), long-beaked hawkbit (*Leontodon saxatili* s), and saltgrass (*Distichlis spicata*).

Photo 11: Looking north at unvegetated drainage channel. Dominant vegetation: chamise, whiteleaf manzanita (*Arctostaphylos viscida*), coyote brush (*Baccharis pillularis*), and toyon (*Heteromeles arbutifolia*).

Photos 12: Looking southwest across open, sand flat, mine spoils sediment deposits.

Photo 13: Looking south along vegetated berm. Stormwater collects along vegetated berm. Dominant vegetation: arroyo willow (*Salix lasiolepis*) , red brome (*Bromus madritensis subsp. rubens*), white sweet clover (*Melilotus alba*), Baltic rush (*Juncus balticus*), and tall flat sedge (*Cyperus eragrastis*).

Photos 14: Looking northwest across shallow seasonal wetland. Dominant vegetation: arroyo willow (*Salix lasilepis*), coyote brush (*Baccharis pilularis*), long-beaked hawkbit (*Leontodon saxatilis*), Baltic rush (*Juncus balticus*), saltgrass (*Distichlis spicata*) and hairy vetch *(Vicia villosa*) .

Photo 15: large area of reel and gully formation from channel flow. Highly erodable sediment deposits from mining activity. No vegetation in the area.

Photos 16: Looking southeast across pond. Dominant vegetation: arroyo willow (*Salix lasiolepis*), smartweed (*Persicaria* sp.), Fremont cottonwood (*Populus fremontii subsp. fremontii*), cattail (*Typha* spp.), Baltic rush (Juncus balticus), curly dock (*Rumex crispus*), tall flatsedge (*Cyperus eragrastis*), and Iris-leaf rush (*Juncus xiphoides*).

Photo 17: Looking northwest at seasonal wetland along driveway. Dominant vegetation: Italian ryegrass (*Lolium multiflorum*) , foxtail barley (*Hordeum jubatum*) and oat (*Avena* sp).

Photos 18: Looking northwest at seasonal wetland along driveway. Dominant vegetation: Italian ryegrass (*Lolium multiflorum*) , foxtail barley (*Hordeum jubatum*) and oat (*Avena* sp).

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Ione (3812038) OR Amador City (3812047) OR Carbondale (3812141) OR Clements (3812121) OR Goose Creek (3812131) OR Jackson (3812037) OR Valley Springs (3812027) OR Wallace (3812028) OR Irish Hill (3812048))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
bald eagle *Haliaeetus leucocephalus*	ABNKC10010	Delisted	Endangered	G5	S3	FP
bank swallow *Riparia riparia*	ABPAU08010	None	Threatened	G5	S2	
big-scale balsamroot *Balsamorhiza macrolepis*	PDAST11061	None	None	G2	S2	1B.2
Bisbee Peak rush-rose *Crocanthemum suffrutescens*	PDCIS020F0	None	None	G2Q	S2	3.2
Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	IIHYM35030	None	None	G2	S2	
Boggs Lake hedge-hyssop *Gratiola heterosepala*	PDSCR0R060	None	Endangered	G2	S2	1B.2
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
California red-legged frog *Rana draytonii*	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California tiger salamander *Ambystoma californiense*	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
dwarf downingia *Downingia pusilla*	PDCAM060C0	None	None	GU	S2	2B.2
giant gartersnake *Thamnophis gigas*	ARADB36150	Threatened	Threatened	G2	S2	
golden eagle *Aquila chrysaetos*	ABNKC22010	None	None	G5	S3	FP
grasshopper sparrow *Ammodramus savannarum*	ABPBXA0020	None	None	G5	S3	SSC
great blue heron *Ardea herodias*	ABNGA04010	None	None	G5	S4	
great egret *Ardea alba*	ABNGA04040	None	None	G5	S4	
Henderson's bent grass *Agrostis hendersonii*	PMPOA040K0	None	None	G2Q	S2	3.2
Hoover's calycadenia *Calycadenia hooveri*	PDAST1P040	None	None	G3	S3	1B.3
Ione buckwheat *Eriogonum apricum var. apricum*	PDPGN080F1	Endangered	Endangered	G2T1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ione Chaparral *Ione Chaparral*	CTT37D00CA	None	None	G1	S1.1	
Ione manzanita *Arctostaphylos myrtifolia*	PDERI04240	Threatened	None	G1G2	S1S2	1B.2
Irish Hill buckwheat *Eriogonum apricum var. prostratum*	PDPGN080F2	Endangered	Endangered	G2T1	S1	1B.1
legenere *Legenere limosa*	PDCAM0C010	None	None	G2	S2	1B.1
midvalley fairy shrimp *Branchinecta mesovallensis*	ICBRA03150	None	None	G2	S2S3	
Northern Hardpan Vernal Pool *Northern Hardpan Vernal Pool*	CTT44110CA	None	None	G3	S3.1	
osprey *Pandion haliaetus*	ABNKC01010	None	None	G5	S4	WL
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G5	S3	SSC
Parry's horkelia *Horkelia parryi*	PDROS0W0C0	None	None	G2	S2	1B.2
Patterson's navarretia *Navarretia paradoxiclara*	PDPLM0C150	None	None	G2	S2	1B.3
pincushion navarretia *Navarretia myersii ssp. myersii*	PDPLM0C0X1	None	None	G2T2	S2	1B.1
prairie falcon *Falco mexicanus*	ABNKD06090	None	None	G5	S4	WL
prairie wedge grass *Sphenopholis obtusata*	PMPOA5T030	None	None	G5	S2	2B.2
Rudolph's cave harvestman *Banksula rudolphi*	ILARA14080	None	None	G1	S1	
Sacramento Orcutt grass *Orcuttia viscida*	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Sanford's arrowhead *Sagittaria sanfordii*	PMALI040Q0	None	None	G3	S3	1B.2
Stanislaus monkeyflower *Erythranthe marmorata*	PDPHR01130	None	None	G2?	S2?	1B.1
steelhead - Central Valley DPS *Oncorhynchus mykiss irideus*	AFCHA0209K	Threatened	None	G5T2Q	S2	
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S3	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Tulare cuckoo wasp *Chrysis tularensis*	IIHYM72010	None	None	G1G2	S1S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Tuolumne button-celery *Eryngium pinnatisectum*	PDAPI0Z0P0	None	None	G2	S2	1B.2
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	IICOL48011	Threatened	None	G3T2	S2	
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered	None	G4	S3S4	
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western spadefoot *Spea hammondii*	AAABF02020	None	None	G3	S3	SSC
yellow-breasted chat *Icteria virens*	ABPBX24010	None	None	G5	S3	SSC

Record Count: 47

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Amador City (3812047) OR Carbondale (3812141) OR Clements (3812121) OR Goose Creek (3812131) OR Ione (3812038) OR Irish Hill (3812048) OR Jackson (3812037) OR Valley Springs (3812027) OR Wallace (3812028))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
bald eagle *Haliaeetus leucocephalus*	ABNKC10010	Delisted	Endangered	G5	S3	FP
bank swallow *Riparia riparia*	ABPAU08010	None	Threatened	G5	S2	
big-scale balsamroot *Balsamorhiza macrolepis*	PDAST11061	None	None	G2	S2	1B.2
Bisbee Peak rush-rose *Crocanthemum suffrutescens*	PDCIS020F0	None	None	G2Q	S2	3.2
Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	IIHYM35030	None	None	G2	S2	
Boggs Lake hedge-hyssop *Gratiola heterosepala*	PDSCR0R060	None	Endangered	G2	S2	1B.2
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
California red-legged frog *Rana draytonii*	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California tiger salamander *Ambystoma californiense*	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
dwarf downingia *Downingia pusilla*	PDCAM060C0	None	None	GU	S2	2B.2
giant gartersnake *Thamnophis gigas*	ARADB36150	Threatened	Threatened	G2	S2	
golden eagle *Aquila chrysaetos*	ABNKC22010	None	None	G5	S3	FP
grasshopper sparrow *Ammodramus savannarum*	ABPBXA0020	None	None	G5	S3	SSC
great blue heron *Ardea herodias*	ABNGA04010	None	None	G5	S4	
great egret *Ardea alba*	ABNGA04040	None	None	G5	S4	
Henderson's bent grass *Agrostis hendersonii*	PMPOA040K0	None	None	G2Q	S2	3.2
Hoover's calycadenia *Calycadenia hooveri*	PDAST1P040	None	None	G3	S3	1B.3
Ione buckwheat *Eriogonum apricum var. apricum*	PDPGN080F1	Endangered	Endangered	G2T1	S1	1B.1

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Ione manzanita *Arctostaphylos myrtifolia*	PDERI04240	Threatened	None	G1G2	S1S2	1B.2
Irish Hill buckwheat *Eriogonum apricum var. prostratum*	PDPGN080F2	Endangered	Endangered	G2T1	S1	1B.1
legenere *Legenere limosa*	PDCAM0C010	None	None	G2	S2	1B.1
midvalley fairy shrimp *Branchinecta mesovallensis*	ICBRA03150	None	None	G2	S2S3	
Northern Hardpan Vernal Pool *Northern Hardpan Vernal Pool*	CTT44110CA	None	None	G3	S3.1	
osprey *Pandion haliaetus*	ABNKC01010	None	None	G5	S4	WL
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G5	S3	SSC
Parry's horkelia *Horkelia parryi*	PDROS0W0C0	None	None	G2	S2	1B.2
Patterson's navarretia *Navarretia paradoxiclara*	PDPLM0C150	None	None	G2	S2	1B.3
pincushion navarretia *Navarretia myersii ssp. myersii*	PDPLM0C0X1	None	None	G2T2	S2	1B.1
prairie falcon *Falco mexicanus*	ABNKD06090	None	None	G5	S4	WL
prairie wedge grass *Sphenopholis obtusata*	PMPOA5T030	None	None	G5	S2	2B.2
Rudolph's cave harvestman *Banksula rudolphi*	ILARA14080	None	None	G1	S1	
Sacramento Orcutt grass *Orcuttia viscida*	PMPOA4G070	Endangered	Endangered	G1	S1	1B.1
Sanford's arrowhead *Sagittaria sanfordii*	PMALI040Q0	None	None	G3	S3	1B.2
Stanislaus monkeyflower *Erythranthe marmorata*	PDPHR01130	None	None	G2?	S2?	1B.1
steelhead - Central Valley DPS *Oncorhynchus mykiss irideus*	AFCHA0209K	Threatened	None	G5T2Q	S2	
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S3	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Tulare cuckoo wasp *Chrysis tularensis*	IIHYM72010	None	None	G1G2	S1S2	

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valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	IICOL48011	Threatened	None	G3T2	S2	
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered	None	G4	S3S4	
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western spadefoot *Spea hammondii*	AAABF02020	None	None	G3	S3	SSC
yellow-breasted chat *Icteria virens*	ABPBX24010	None	None	G5	S3	SSC

Record Count: 47