MATERIAL SITE #308

ZURICH PIT

RECLAMATION PLAN

Mine Identification # 91-14-0143

May 30, 2025

California Department of Transportation (Caltrans)

500 South Main Street

Bishop, California 93514

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICIES

1.0.0 INTRODUCTION

This Surface Mining and Reclamation Plan addresses the operation and reclamation of the Caltrans Material Site 308, also known as the Zurich Pit. The Zurich Pit is located near the community of Big Pine in Inyo County, California. The total Caltrans right-of-way (ROW) area is 54.3 acres, encompassing an extensive area of alluvial, aggregate materials that can serve as a source of sand and gravel to be used for road construction and maintenance. Of the total 54.3 acres, 14 acres of previously mined areas will be mined in two phases over a period of 59 years.

This reclamation plan describes a process that will minimize environmental impacts during and resulting from mining, implement reclamation activities as soon as possible, and return the mined land to a condition suitable of supporting open space, wildlife habitat and designated end uses.

1.1.0 APPLICANT & OPERATOR

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1.4.0 LOCATION AND SITE HISTORY

The site is in Inyo County, approximately 3 miles northeast of Big Pine at post-mile marker 21.5 along State Route 168 East. The Zurich Pit was previously used as an aggregate source for more than 50 years until it was deactivated and underwent reclamation during early 2000s. The property has since been used primarily for recreational purposes by the public, as the land was previously owned and managed by the Bureau of Land Management. The site was managed by the Bishop BLM Field Office as a Community Use Pit until approximately 2005, when they decided to reclaim the site and no longer issue special use permits (SUP) for extraction by applicants. No reclamation plan existed for the site, and the pit was designated as a "community use pit" by the BLM. Previous records indicate that Caltrans mined Zurich Pit (then MS# 283) through the 1980s and 1990s via Free Use Permits issued by the Bishop BLM field office (on an as-need basis). Records also indicate that Inyo County Roads Department and Caltrans may have been the only SUP applicants to extract material from the site. Initial Caltrans SUP's for the site were for general use extraction of approximately 2,000 cubic yards annually for highway maintenance purposes, for five to ten years at a time. Later SUP's were for specific projects and quantities, which also included asphalt batch plants. Records starting in 1987 indicate that the BLM started analyzing closing this site and opening another site in the Big Pine area due to local concerns over visual impacts and dust generation. In 2005, a cooperative agreement was developed between Caltrans and BLM to each contribute $25,000 towards reclamation work. Some road ripping, minor revegetation, and drainage work was done with these funds via a Caltrans contract. The site remains relatively disturbed and is utilized by the public for OHV staging, target shooting, and illegal dumping, currently accessed by a dirt road connecting to the highway from the west.

1.4.1 HIGHWAY EASEMENT DEED

Caltrans received a Letter of Consent on September 14, 2023 from the Bureau of Land Management Bishop Field Office for the FHWA map application package submitted for a new Highway Easement Dead containing 54.3 acres at what is known as Zurich Pit 308. The Highway Easement Dead on Federal Lands made on April 11, 2024 was then filed with the Inyo County Recorder's Office on May 02, 2024 (Appendix C). This property is also known as Assessor's Parcel Number 4264-1.

1.4.2 CADASTRAL & GEOGRAPHIC COORDINATES

The site corresponds to a portion of Section 03, Township 9 South, and Range 34 East (Mount Diablo Base and Meridian [MDBM]) of the USGS "Uhlmeyer Spring, California" 7.5-minute quadrangle. The approximate center of the pit is located at 37.191813° Latitude and -118.244390° Longitude.

FIGURE 1: REGIONAL LOCATION MAP OF CALTRANS MATERIAL SITE #308

2.0.0 DESCRIPTION OF ENVIRONMENTAL SETTING

2.1.0 SITE ACCESS

Access to the property is via an unmarked, dirt road leading southeast off State Route 168, approximately 3 miles northeast of the community of Big Pine.

2.2.0 GEOLOGY

Owens Valley is one of the westernmost of the down dropped graben blocks of the Basin and Range province and is important because it includes part of the boundary between the Sierra Nevada and Great Basin regions. This boundary is a structural trough separated by normal faults from the Sierra Nevada on the west and the White and Inyo Mountains on the east. As the valley floors were subsiding, the bounding mountain masses of the Sierra Nevada rose leading to erosion and geomorphic processes of the valley walls. The erosion debris was then transported to lower elevations and deposited as alluvial fans, stream deposits, and lake beds.

The deformation that formed the current state of the Owens Valley may have begun in early Tertiary time and has continued to very recent times. First, the glaciers carved into the Valley and deposited extensive moraines during the ice ages in the Pleistocene epoch. Recently, from a geological perspective, the land has been shaped by streams and rivers including the Owens River, the most prominent river in the region.

The geologic history of this area has produced a diverse collection of minerals, making the region an important economic mineral resource and hotspot for mining activity. Some of the major ore found in this region includes silver, lead, gold, copper, zinc, and tungsten.

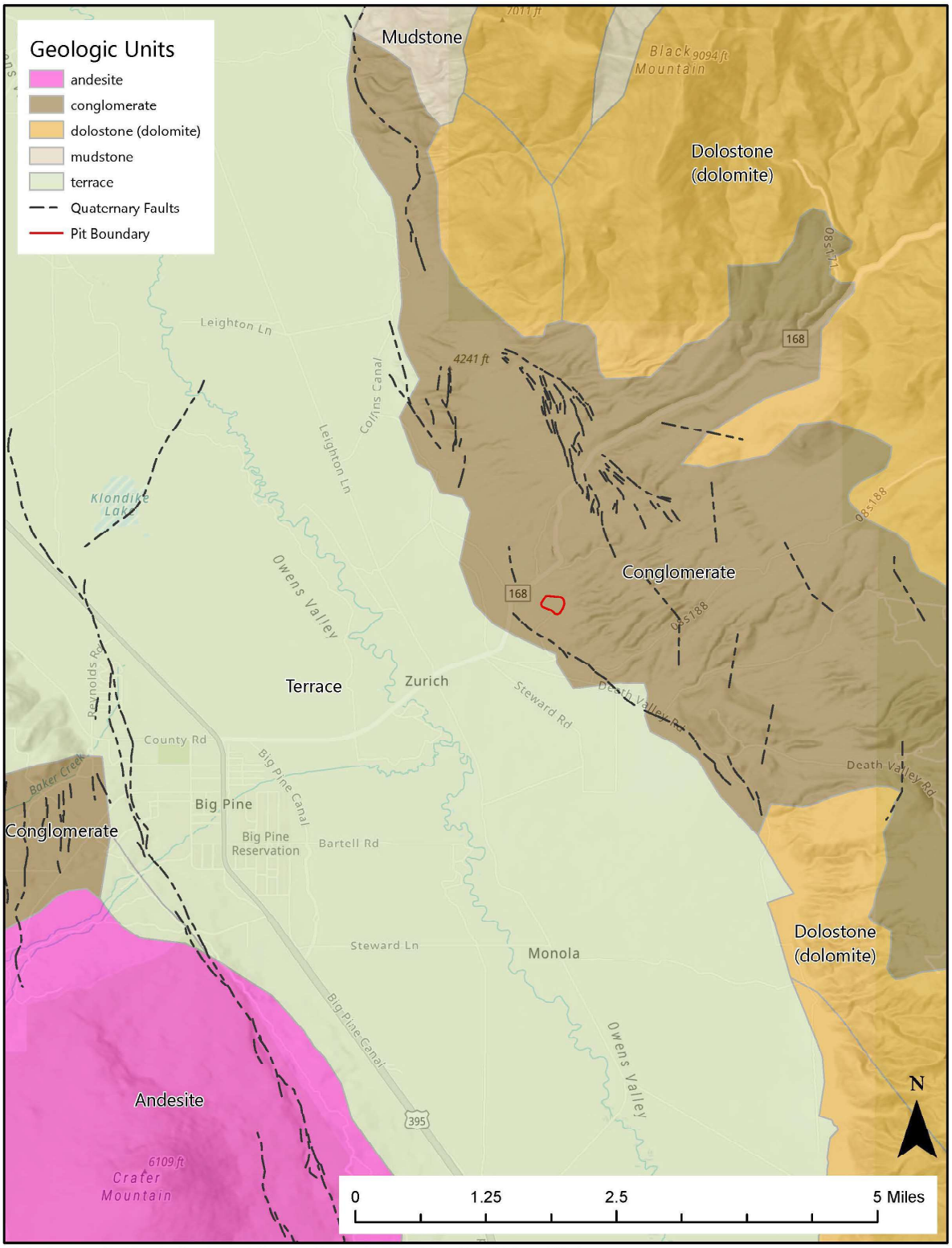
2.2.1 SITE SPECIFIC GEOLOGY

The site is primarily an alluvial deposit composed of sandstone, shale, and gravel deposits dating from the Pleistocene and Pliocene age (Big Pine USGS 15-minute Quadrangle Map). The material site lies within the western edge of the Basin and Range Geomorphic Province within the Owen's Valley portion of the Eastern Sierra Valley System (ESVS) (Stevens et. al., 2013).

2.2.2 SESIMISCITY

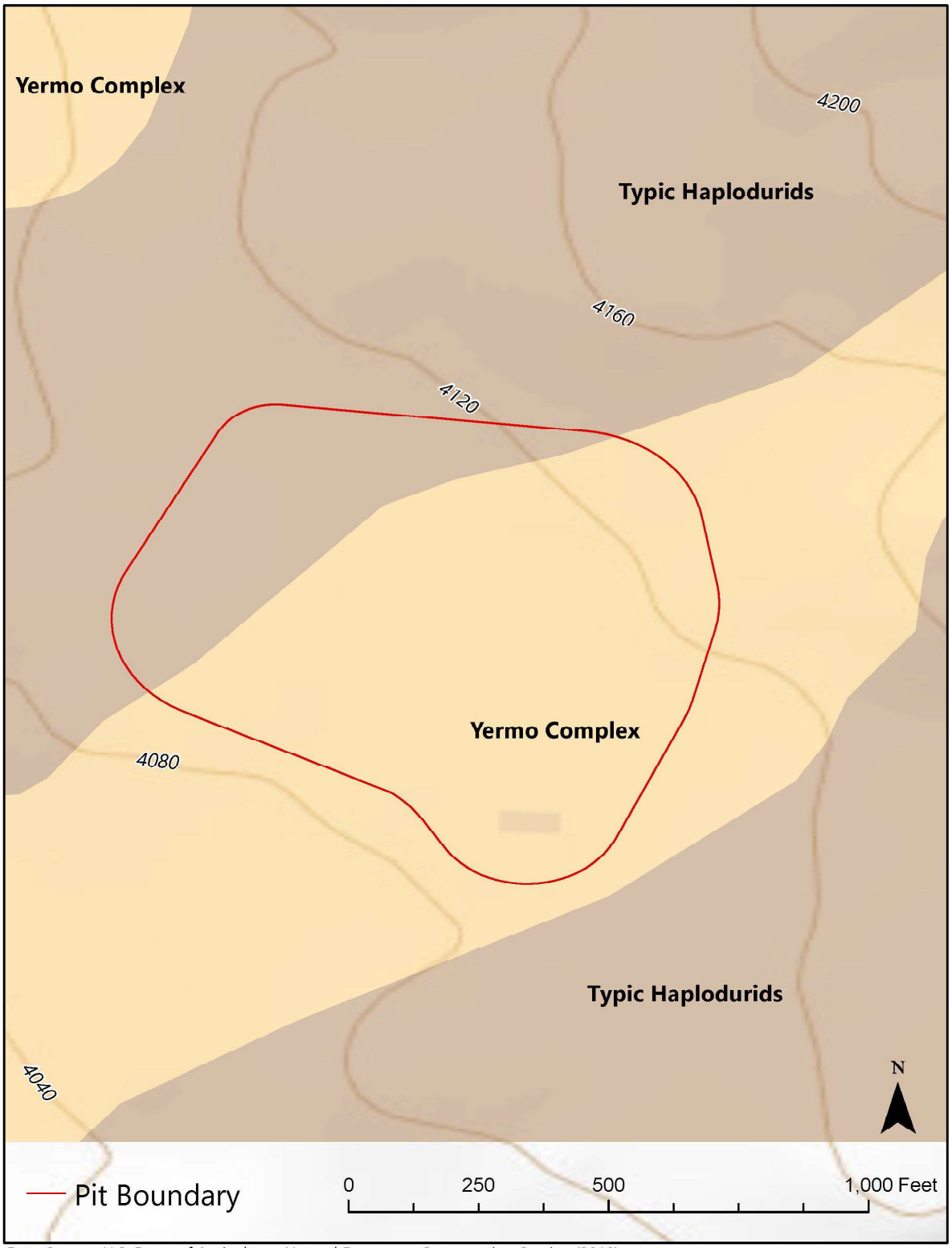
The Zurich material site is within an area of active seismicity and, according to the USGS Quaternary Fault database, the nearest active fault is the Deep Springs fault. This fault lies approximately 10 miles southeast of the material site, and the last suspected movement occurred approximately 1,800 years ago with an estimated recurrence interval between 2 to 4 ky. The largest earthquake to hit this region occurred on March 26, 1872, because of movement along the fault forming the eastern front of Alabama Hills, west of Lone Pine (Richter, 1958, p. 499-503). The earthquake was estimated at a magnitude of 7.4 and was approximately 45 miles south of the Zurich material site.

FIGURE 2: GEOLOGIC MAP OF PROJECT SITE



Data Source: California Geological Survey, Geologic Data Map No. 2 (shp), 1977

FIGURE 3: SOIL AND TOPOGRAPHIC MAP OF PROJECT SITE



Data Source: U.S. Dept. of Agriculture, Natural Resources Conservation Service (2019).

2.3.0 SOILS

The web soil survey for the Benton-Owens Valley Area Parts of Inyo and Mono County (Natural Resources Conservation Service [NRCS], 2016) provided information on known soil types within the study area. Two soil types were identified within the project limits and are as follows: (1) Cambidic Haplodurids-Typic Haplodurids association, cool, 5 to 50 percent slopes, and (2) Yermo stony-Yermo complex, cool, 5 to 15 percent slopes (Figure 6). These soil series are described in more detail below.

2.3.1 Cambidic Haplodurids-Typic Haplodurids Association

This soil complex is a combination of two named soil series, Cambidic (65%) and Typic (25%), and occurs on fan terraces at elevations between 3,900-5,700 feet with 5 to 50 percent slopes. Both individual soil series consists of alluvium derived from mixed rock resources. The Cambidic series soil ranges from shallow to moderately deep, while the Typic series is shallow. Both series are classified as well-drained, medium to rapid runoff, and moderately rapid permeability.

Cambidic soils are stratified into five layers at a depth of 60 inches, with the predominant surface layer ranging from extremely gravelly sandy loam to gravelly sandy loam. Typic soils are less stratified than Cambidic with a depth of 5 inches and 3 layers. and with Both soils have light gray composition. Typic soils are slightly alkaline or moderately alkaline reactive, and calcareous throughout.

2.3.2 Yermo Stony-Yermo Complex

This soil complex is approximately 45% Yermo stony soil, 40% Yermo soil, and 15% contrasting inclusions. The soils originate from mixed alluvium and form along the middle and lower parts of fan terraces at an elevation between 3,700 – 4,400 feet. Vegetation cover is normally between 10-20% on top of these soils, rooting depths are up to 60 inches, and permeability is moderately rapid. Both soils are very well drained and have low water capacity. Yermo, stony soils have a moderate hazard to erosion by wind, while Yermo soils only have a slight. Yermo, stony soils are moderately alkaline to strongly alkaline. Soil texture ranges from cobbly, gravel to extremely gravelly sandy loam.

2.4.0 HYDROLOGY

2.4.1 GROUNDWATER SETTING

The Owens Valley Groundwater Basin (6-012) is approximately 1,030 square miles, ranges from 3,600 feet above mean sea level (amsl) along the Owens Lake to over 9,700 feet amsl near Basin Mountain in the northwestern corner of the basin. Owens Valley Groundwater Basin (OVGB) extends roughly 125 miles from Benton Valley in southeastern Mono County to Haiwee in southwestern Inyo County. OVGB is bounded by nonwater-bearing rocks of the Benton Range on the north, of the Coso Range on the south, of the Sierra Nevada on the west, and of the White and Inyo Mountains on the east. This array of valleys drains via several creeks to the Owens River, which eventually flows southward into the Owens (dry) Lake, a closed drainage depression in the southern

part of the Owens Valley. The principal source of replenishment for the OVGB is percolation of stream flow from the surrounding mountains. Other and much lesser sources of recharge include excess irrigation waters and precipitation (Danskin, 1998).

LADWP owns many of the local water rights and has been extracting water from several of the local sources in the basin since the 1930s. Water table levels have gone through periods of extreme lows to plentiful highs, based on the on the ground pumping and rainfall quantities. For example, groundwater levels were depressed near Bishop and Independence during the late 1920s to 1930s because of heavy pumping, but water levels rebounded somewhat and remained steady through the early 1960s (DWR, 1964). Additionally, a series of wet years between 1982 and 1986 and relatively low groundwater pumping resulted in generally high-water tables, but then was followed by water level declines due to six years of heavy groundwater pumping. The proposed extraction plan is not expected to encounter groundwater, and the depth to groundwater will be monitored as the pit depth increases.

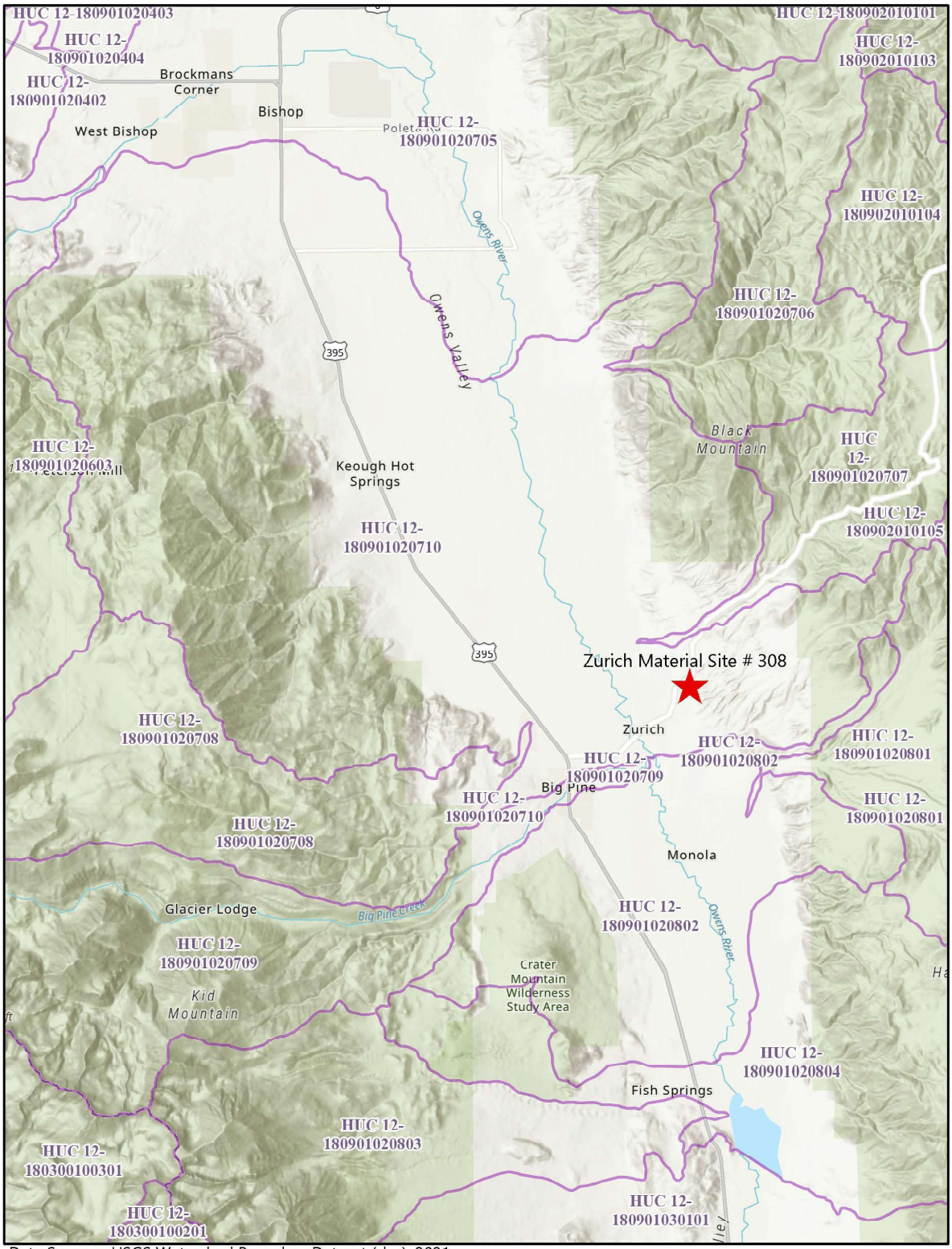
2.4.1.1 LOCAL WELLS

The nearest well to the project site is located east of US 395 and approximately 3 miles southwest of the site (station #371601N1182779W001). This well is currently active and has been monitored by LADWP since 1971. According to the DWR groundwater level data reports, the lowest groundwater depth was 3,925 feet (1971 and 2019), and the highest groundwater depth recorded was 3,902 feet (1989). The most recently reported depth in June 2021 was 3,914 feet (DWR Groundwater Level Report, 2021).

2.4.2 SURFACE WATER SETTING

The site is located within the Crowley Lake watershed and, more specifically, the Rawson Creek-Owens River watershed (HUC# 180901020710), (USGS Hydrography Dataset, 2021). Surface waters within the site originate primarily from tributary, ephemeral streams flowing down canyons along the west side of the White Mountains, across naturally occurring alluvial fans, and out onto the basin. Tributary streams, that reach the Bishop Basin, are captured by the trunk stream of the valley, the Owens River, which has its headwaters in the Long Valley. The Owens River is also the closest running, water body to the site and can be reached by traveling approximately 150 feet downgradient and around 2 miles southwest near the town of Big Pine.

FIGURE 4: WATERSHED (HUC 12) MAP OF PROJECT SITE



Data Sources: USGS Watershed Boundary Dataset (shp), 2021.

2.5.0 BIOLOGY

A general biological resource assessment was conducted by means of literature review and field survey. The biological study area (BSA), or area evaluated for biological resources, includes the intended mining operations area [proposed project site] and surrounding property, 54.3 areas in total. All habitats, flora, and fauna considered sensitive by BLM, California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), and Caltrans were assessed within the BSA.

Plant communities identified within the project site were mapped and classified in accordance with *A Manual of California Vegetation* (Sawyer *et al.,* 2009). The dominant native plant community within the BSA is representative of the Atriplex Confertifolia Shrubland Alliance, commonly referred to as shadscale scrub. Another land cover type described as disturbed/developed was also observed onsite. Disturbed/developed lands are often denuded or devoid of vegetation, however, in areas where soil substrate is present, some plant species, including non-native species, are typically present.

Using the representative plant communities within the BSA, potential sensitive habitats, flora and fauna were assessed using a combination of literature and database review, including USFWS's *Information for Planning and Consulting (IPaC)* and CDFW's *California Natural Diversity Database (CNDDB)* 7.5-minute USGS nine-quad search method. For further details and a full list of species analyzed, refer to the *Biological Resources Memo*, included as Appendix G.

In addition to the literature review, field surveys of the proposed project site were conducted on April 23, 2020, and February 24, 2022, by Caltrans Environmental staff. The survey was conducted from 8:00 a.m. until 11:00 a.m., to capitalize on the period of highest diurnal animal activity. The survey methods entailed a pedestrian survey of the entire project site, using binoculars to identify animal species from a distance. A plant and animal list were maintained during the survey. No sensitive plant or animal species were observed during the survey. Additional focused sensitive plant surveys will be conducted during peak blooming periods within the year prior to the start of each phase of the project.

2.5.1 VEGETATION

Due to the arid environment of the Owens Valley, vegetation is mediated by the hydrology and varies depending on the elevation, floristic region, and soil salinity. Vegetation communities range from salt-tolerant shadscale scrub, alkali sink scrub, desert greasewood scrub, alkali meadow, and desert saltbush scrub on the low elevations of the valley floor, to more drought-tolerant Mojave Mixed Woody Scrub, Blackbush Scrub, and Great Basin mixed scrub on alluvial fans (Davis et al., 1998).

The dominant native plant community within the BSA is representative of the Atriplex Confertifolia Shrubland Alliance, commonly referred to as Shadscale scrub. In the Atriplex Confertifolia Shrubland Alliance, Atriplex confertifolia is dominant or co-dominant in the shrub canopy with white bursage (*Ambrosia Dumosa*), allscale scrub (*Atriplex polycarpa*), spinescale

scrub (*Atriplex spinifera*), green rabbitbrush *(Chrysothamnus viscidiflorus*), blackbrush (*Coleogyne ramosissima*), Acton brittlebush (*Encelia actonii*), Virgin river brittlebush (*Encelia virginensis*), Mormon tea (*Ephedra nevadensis*), Heermann's buckwheat (*Eriogonum heermannii*), spiny hop sage (*Grayia spinosa),* sticky snake weed *(Gutierrezia microcephala*), winter fat (*Krascheninnikovia lanata*), creosote bush (*Larrea tridentata*), Anderson thornbush (*Lycium andersonii*), budsage *(Picrothamnus desertorum*), greasewood (*Sarcobatus vermiculatus*) and longspine horsebrush (*Tetradymia axillaris*). Emergent, taller shrubs may be present at low cover.

Seventy one (71) sensitive plant species were returned from the *Bishop BLM Office Sensitive Species List* and CNDDB search of the Uhlmeyer Spring, Big Pine, Waucoba Mountain, Tinemaha Reservoir, Poleta Canyon, Westgard Pass, Deep Springs Lake, Cowhorn Valley and Fish Springs 7.5-minute USGS quadrangles. Of these seventy one species, seven have potential to occur within the site, including: Coyote gilia (*Aliciella triodon*), Shockley's milk vetch (*Astragalus serenoi var. shockleyi*), King's eyelash grass (*Blepharidachne kingii*), Wheeler's dune-broom (*Chaetadelpha wheeleri*), MacDougal's lomatium (*Lomatium foeniculaceum ssp. Macdougalii*), Intermontane lupine (*Lupinus pusillus var. intermontanus*), and Nevada oryctes (*Oryctes nevadensis*).

2.5.1.1 SITE SPECIFIC VEGETATION

Plant communities identified within the site were mapped and classified in accordance with *A Manual of California Vegetation* (Sawyer *et al.,* 2009). The vegetation community surrounding the material site is dominated by salt tolerant, Shadscale scrub natural community. The site is located within a network of alluvial fans, where the water table is disconnected from the root zone; therefore, plant communities survive on precipitation alone.

Prominent plant species observed within the site during field surveys include scadscale scrub (*Atriplex confertifolia*), Mojave indigo bush (*Psorothamnus arborescens*), budsage (*Artemisia spinescens*), winterfat (*Krascheninnikovia lanata*), greasewood (*Sarcobatus vermiculatus*), Mojave woolyaster (*Xylorhiza tortifolia*), and desert trumpet (*Eriogonum inflatum*). Of the seventy-one sensitive species that were analyzed, seven rare plant species were determined to potential to occur within the BSA. Focused rare plant surveys will be conducted within the BSA during peak blooming periods, prior to the start of each phase of mining operations.

Areas classified as 'disturbed' did not support a native plant community and consisted of dirt roads and surfaces. These roads and surfaces are currently utilized by the public, managed by BLM and designated as multi-use public land. Disturbed areas dominate much of the proposed project site, with native upland communities surrounding the disturbed area, which exists as a footprint of the previous material site.

Approximately 86% of the proposed, 14-acre area for mining was previously disturbed by prior mining operations. However, baseline vegetation conditions were established based on transects performed in undisturbed areas within the site and near the site that reflect surrounding, undisturbed Shadscale scrub conditions.

Table 2.5.1.1: Plant species survey #1

Zurich Pit - Botanical surveys						
Survey:	1					
Surveyors:	D. Aalbu, R. Spalding					
Date:	4/23/2020					
Time:	8-11 AM					
Weather:	~65F, winds 5-10 mph					
Flora Observed						**Fauna Observed**
Type	**Scientific Name**	**Common Name**	**If Dominant, then Y**			**Come Name**
Shrubs	Atriplex confortifolia	shadscale scrub	Y			Common Raven
	Psorothamnus arborescens	Mojave Indigo bush	Y			Turkey Vulture
	Artemisia spinescens	Budsage	Y			White-crowned sparrow
	Ephedra nevadensis	Nevada Ephedra				Black-throated sparrow
	Fricameria teretifolia	Green rabbitbrush				Southern desert horned-lizard
	Krascheninnikovia lanata	Winterfat	Y			black-tailed jackrabbit
	Menodora spinescens	Spiny desert olive				
	Sarcobatus vermiculatus	Greasewood	Y			
Grasses	Bromus madritensis ssp. Rubens	foxtail brome (i)				
Perennial Herbs	Xylorhiza tortifolia	Mojave woolyaster				
	Eriogonum inflatum	desert trumpet	Y			
Annual Herbs	Sisymbrium altissimum	tumble mustard (i)				
	Phacelia femontii	Fremont's phacelia				
	Oxytheca perfoliata	roundleaf puncturebract				
	Nama aretioides	Purple nama				
	Crypthantha recurvata	curve nut cryptantha				
	Crypthantha circumscissa	Western forget me not				
	Chaenactis xantiana	Xantus' chaenactis				
	Calycoseris parryi	yellow tackstem				(i) = invasive
	Gilia cana ssp. Triceps	showy gilia				
	Chorizanthe brevicornu	brittle spine flower				
	Salsola tragus	Russian thistle (i)				
	Lupinus odoratus	Mohave lupine				
	Eriogonum brachypodum	Parry's buckwheat				

2.5.1.2 SENSITIVE COMMUNITIES

The California Natural Diversity Database (CNDDB) returned three sensitive natural communities within the USGS 9-quad search area, including: Bristlecone Pine Forest, Transmontane Alkali Marsh, and the Water Birch Riparian Scrub. All three communities are absent from the BSA. The closest plant community containing riparian shrub exists approximately 0.5 miles southeast of the project site on Los Angeles Department of Water and Power (LADWP) property.

2.5.1.3 INVASIVE EXOTICS

Invasive exotics are likely to occur onsite, given the presence of disturbed land within the proposed project area. Three invasive species were observed during the 2020 field survey within the project area including: foxtail brome (*Bromus madritensis ssp. Rubens*), tumble mustard (Sisymbrium altissimum), and Russian thistle (*Salsola tragus*).

2.5.2 WILDLIFE

The upland shadscale shrub vegetation community and network of alluvial fans are characteristic of an arid high desert landscape, which contains a largely open viewshed and highly variable terrain. Common wildlife families in this type of habitat include small mammals, reptiles, and birds. Characteristics species of the shadscale aspect of the xerophytic phase of Alkali Scrub include the pallid/pale kangaroo mouse (*Microdipodops pallidus*), chisel-toothed kangaroo rat (*Dipodomys microps*), zebra-tailed lizard (*Callisaurus draconoides*), and the San Emigdio blue

butterfly (*Plebulina emigdionis*), whose host plant is four-wing saltbush (Jaeger and Smith 1966, Pyle 1981). Characteristic species of other aspects of Alkali Scrub habitat are the Mojave ground squirrel (*Xerospermophilus mohavensis*), zebra-tailed lizard (*Callisaurus draconoides*), and long-nosed leopard lizard (*Gambelia wislizenii*). Other common animal species observed during the 2020 field survey include: common raven (*Corvus corax*), turkey vulture (*Cathartes aura*), white-crowned sparrow (*Zonotrichia leucophrys*), black-throated sparrow (*Amphispiza bilineata*), southern desert horned lizard (*Phrynosoma platyrhinos*), and black-tailed jackrabbit (*Lepus californicus*). Given the sparsity of vegetation, most bird species are more likely to exist as opportunistic foragers then breeders within the BSA.

2.5.2.1 DESCRIPTION OF HABITAT

The proposed project site is located within a previously disturbed area. Existing human activity and disturbance in the form of dirt roads, trash and denuded pit area within the project site make the area generally unsuitable habitat for sensitive-status species.

The BSA, which includes the project site and surrounding 54.3-acre property, includes a shadscale scrub vegetation community and exists within an alluvial fan topography where the vegetation, though sparse, is diverse in species. In areas where native vegetation exists and disturbance is limited, there may be habitat for both common and sensitive-status animal species.

2.5.2.2 SENSITIVE SPECIES

In total, forty-three sensitive-status animal species were identified during the literature review. The BSA was not found to be within critical habitat for any State or Federally listed species or be potential habitat for any State of Federally listed species. However, the common/northern sagebrush lizard, a species considered sensitive by the BLM was found to have potential habitat within the BSA. To avoid any impacts to the northern sagebrush lizard, focused reptile surveys will be conducted within the BSA prior to the start of mining operations. If any northern sagebrush lizard individuals are observed, the BLM will be consulted with to determine appropriate avoidance and minimization measures.

2.6.0 AIR RESOURCES/CLIMATE

The semiarid to arid climate in the Owens Valley is greatly influenced by the Sierra Nevada mountain range and is characterized by low precipitation, abundant sunshine, frequent winds, moderate to low humidity, and high potential evapotranspiration.

2.6.1 PRECIPITATION

Precipitation is chiefly derived from moisture-loaded airmasses, formed over the Pacific Ocean, moving eastward over the Sierras. As air masses descend the eastern Sierra slope, the descending air warms, clouds evaporate, and precipitation declines east of the range. The combined effect of (1) increased precipitation as air masses ascend the west slope and cross the Sierra crest, and (2) decreasing precipitation as air masses descend the east slope is known as the "rain shadow effect." Due to this effect, the average precipitation

along the Owens Valley floor and near the project site is approximately 5 – 10 in/year (Danskin, 1998).

2.6.2 TEMPERATURE

Records taken from the Bishop and Independence National Weather Bureau stations indicate that daily temperatures typically fall to as low as 24 F in winter and can rise to as high as 107° F in summer, but rarely go below 14 F or above 102 F. These conditions are typical of the semiarid to arid climate in high desert basins.

2.6.3 AIR QUALITY

Air quality in the area is typically excellent, with visibility exceeding 70 miles most of the time. However, strong dust storms occur in the region due to the exposure of erodible sediments on the valley floor. Air quality can be greatly reduced in the mine site during periods of high winds.

2.6.4 WIND

Prevailing wind direction is westerly but varies depending on the type of storm and deflection caused by the surrounding mountains. Typical windspeeds in the valley range from zero to more than 30 mi/h, but have an overall, annual average between 5-7 mi/h. Winds are highly variable, even within a single day, and have no apparent seasonal trend. High windspeed events can occur at any time during the year, but generally accompany a winter or a spring storm.

2.7.0 LAND USES AND AESTHETICS

The property is designated as open space-natural resources in the Inyo County General Plan, meaning that low-intensity rural uses are allowable in a manner that recognizes and maintains the resource values of the parcel. Inyo County defers land use authority to the federal or other agency land authority; therefore, the project does not require a land use approval, such as a Conditional Use Permit (CUP), from Inyo County. However, Inyo County is the designated Lead Agency under SMARA and has the authority to review and approve the Reclamation Plan.

3.0.0 DESCRIPTION OF PROPOSED MINING OPERATION

3.1.0 DIMENSIONS / ACREAGE

Material Site #308 encompasses approximately 54.3 acres, of which 14 acres will be mined in two phases, to a depth no greater than 40 feet below existing grade. The current boundary also includes a storage and operations area within the pit's bottom floor. The new site boundary will be clearly delineated with metal posts, survey markers, and material site boundary signs.

3.1.1 MAXIMUM ANTICIPATED DEPTH

The maximum anticipated depth of surface mining at the proposed site is 40 feet. The material site slopes would be regraded to the final 3:1 slope. Final elevations are expressed in terms of elevation above mean sea level (amsl). Phase I final mining depths would range from approximately 4,088 feet amsl at the northeast portion to 4,095 feet amsl at the

southeast portion of the pit. The final Phase 2 depth would be at 4,068 feet amsl in the southern portion of the pit, refer to Construction Details C-4. Mine tailings will be backfilled into the pits prior to reclamation to assist with final contouring and construction of the final slopes.

3.2.0 INITIATION AND TERMINATION DATES

The initiation of mining will commence once the Notice of Completion is received from Inyo County on the reclamation plan application. Phase 1 is estimated to span approximately 16 years and phase 2 at approximately 43 years, or until 20XX. Material production estimates are based on an average of 5,000 CY per year. The County's Notice of Completion and associated conditions of approval will dictate the active term for mining.

3.3.0 PRODUCTION SCHEDULE

Mining activities will occur in two phases, with a total estimated production volume of 294,000 cubic yards (CY). An average annual estimate of mining production for the site is 5,000 CY. Emergency road repairs due to flood and/or landslide damage can significantly increase production. Little to no waste is anticipated during production. After the completion of the mining phases, final site reclamation will commence.

The primary use of the site would be for highway maintenance and operations, including:

- Material mining, sorting, and stockpiling for use in routine and emergency maintenance activities on the State Highway System.
- Caltrans maintenance forces would perform mining activities mostly with graders, loaders, dozers, sorting grizzlies, and mobile shaker/sorters.
- Only reusable imported natural materials collected from highway clean-up or Caltrans construction activities, such as dirt and rock, would be temporarily stored at the site. All other non-reusable materials would be disposed of elsewhere, likely at the County landfill.

3.3.1 MINING PHASES

MINING PHASE	MINED RAW MATERIAL (CUBIC YARDS)	MAXIMUM ANTICIPATED DEPTH (FT)	AREA - BOTTOM (ACRES)	AREA -TOP (ACRES)	DURATION[1] (YEARS)
Phase 1	79,000	20	3.25	8.21	16
Phase 2	215,000	37	3.25	12.53	43
TOTAL	**294,000**	**37**	**3.25**	**12.53**	**59**

[1] The estimated duration is based on an average production of 5,000 CY per year.

Please refer to the Operation Plan (Appendix A) for a more detailed description of the project phases.

3.4.0 MINING PLAN

3.4.1 Drainage Control

The NOAA rainfall intensity-duration-frequency data tables (2021) were consulted for the designs of sufficient on-site water storage and erosion control methods, and the models were calculated based on a 25-year, 60-minute storm event. Additionally, the site is considered an area of minimal flood hazard (FEMA, 2021), and is neither located within a 100-year flood plain nor within 1-mile of a state highway bridge. The proposed extraction plan is not expected to encounter groundwater. The depth to groundwater will be monitored as the pit depth increases.

In the early stages of mining the site, the pit will be too shallow to accommodate the 25-year 1-hour design storm volume, so runoff will be directed to its natural course with the addition of armored rock riprap to protect against erosion. At a later stage in the course of mining, the pit will have sufficient volume for the design storm which will allow it to act as a retention pond and stilling basin. The armored overflow will still act as erosion control in the event of a larger discharge.

Caltrans adaptive stormwater prevention practices will also be used to address conditions as they evolve. Surface runoff and drainage from surface mining activities shall be controlled by Best Management Practices (BMPs) such as check dams, ditches, berms, swales, fiber rolls, and sediment detention basins will utilize localized earthen materials. BMPs will be utilized as needed on a temporary basis for sediment control.

Caltrans complies with the waste discharge requirements described in the Order 2022-0033-DWQ: *National Pollutant Discharge Elimination System Statewide Stormwater Permit and Waste Discharge Requirements for State of California Department of Transportation* (Statewide NPDES Permit).

3.4.2 Topsoil Handling

During material extraction operations, duff/topsoil (the top 6 inches, including woody debris) will be stockpiled within the 20-foot buffer zone for future slope reclamation. Mining overburden/waste material will be stored at the outer perimeter near the base of the outer slopes and kept at a minimum. Upon final slope configuration, overburden material would be used to reach final slope configuration if necessary.

3.4.3 Onsite Hazardous Materials

Mining will require the use and onsite storage of a loader, which contain hazardous materials (i.e., fuel, oil, hydraulic fluid). The loader will be parked on an impermeable surface (i.e., paved or plastic lined). Other sources of hazardous materials to be stored on the property may include fuel, lubricating oils, and other vehicle and equipment fluids.

All hazardous and nonhazardous waste will be disposed of according to state and local health and safety ordinances. All Best Management Practices (BMP) would be used to

reduce the potential for the discharge of materials from hazardous material storage areas by minimizing exposure of the materials to stormwater and safeguarding against accidental release of materials (Caltrans, 2003).

3.4.4 Dust, Visual, and Emissions Control

Temporary visual impacts for equipment visible from scenic visual receptors will be minimized as much as possible by screening/shielding with earthen berms or placement within subgrade detentions.

Air quality parameters that are potentially affected by aggregate mining operations are vehicular emissions and suspended particulate (dust). Mining operations would not significantly increase vehicular traffic on SR 168. Increased emissions would however emanate from the pit during the active extraction phase. However, the site will be mined in a manner that will result very nearly in the final reclaimed landform; therefore, reclamation activities will not cause an increase in vehicular emissions.

Because the soil disturbance from materials processing, extraction, and hauling is a "fresh" disturbance, the major component of the produced dust will be of large particle size (greater than 10 microns), which settles out rapidly. Best available control technology, such as maintaining a moist aggregate surface, will be used to suppress processing, extraction, and hauling dust sources. Reclamation activities, such as re-soiling with stockpiled topsoil mixed with native vegetative debris, will also help to control dust.

3.4.5 Noise

Mining operations may include the use of a D8, loaders, belly dumps, bobtail trucks, maintenance trucks, and haul trucks. This aspect of the mining operation will affect noise and emissions. The noise emissions will be most heavily concentrated within the processing area of the pit and will be shielded from surrounding receptors by the pit walls and topsoil berms. Both the physical walls of the pit and the large distance to receivers will reduce the potential noise impact from mining.

3.4.6 Test Plots for Revegetation

Test plots will not be utilized at this site, because they will not produce any additional value to current known data. We have solid evidence what will revegetate the site from previous reclamation via coop between BLM and Caltrans, as well as what grew over the past 15 years. The vegetation surveys conducted for this reclamation plan (see table 2.5.1.1 and table 4.9.3.1), which show native dominant species coverage, which developed naturally on its own. The pit floor, which was not decompacted, shows great success by Shadscale coverage throughout. Pit slopes show Shadscale, plus other species like Mojave Indigo Bush, Budsage, and Spiny desert olive to be quite successful on their own.

3.5.0 PROCESSING EQUIPMENT

All processing equipment will be temporarily used at the site during screening operations only. A portable screening operation will be moved onto the site during periods of operation, which primarily constitutes screening grizzlies, a bulldozer, a loader, and a sorting hopper. No permanent buildings or equipment will be construed on site as part of the mining operation.

3.6.0 WATER REQUIREMENTS

Water requirements for this site will be limited to that needed for processing and for dust control. A water truck with pump and sprayer will be used on site to mitigate dust related to hauling, grading, and particularly during screening operations. Water trucks will be filled at the Independence Maintenance Yard or the Bishop Maintenance Yard with an average of 5,000 gallons per day usage during summer processing operations, and an average of 15 days or processing per year to create stockpiles.

3.6.1 Wastewater

The only type of wastewater to be produced by this mining operation will be screening water that will be collected in the operations area and allowed to evaporate or infiltrate.

3.6.2 Drinking Water

Drinking water will only be available on the site by employees that bring their own water jugs filled by offsite sources.

3.7.0 HOURS OF OPERATION/NUMBER OF EMPLOYEES

The hours of operation may be up to 12 hours per day during the hours of 7:00 AM to 7:00 PM. On average it is estimated that this operation will employ 2-3 people during mining activities. No temporary facilities for employees are anticipated to be provided at the mine site.

3.8.0 TRANSPORATION

During operational phases, transportation by employees to the mine site will not significantly increase traffic on State Route 168 nor Highway 395 due to the low number of workers. Additionally, the minimal frequency needed for the transportation of aggregate resources to road construction locations will not have a significant increase on SR 168 nor Highway 395 traffic activity.

4.0.0 DESCRIPTION OF PROPOSED RECLAMATION

4.1.0 SUBSEQUENT USES

The land is zoned by Inyo County as natural resources open space, with no special land use restrictions. According to various resource maps, the site does not support any designated, critical wildlife habitat; however, the site provides general habitat values to various wildlife species. The new pit area will be reclaimed to open space natural resources, which will leave the site readily adaptable to alternative end uses.

4.2.0 IMPACT ON FUTURE MINING

The aggregate resource extends beyond the site boundaries and is at least 100 feet deep. The current mining plan will not have exhausted onsite resources, and reclamation of this site will not preclude mining at a future date.

4.3.0 RECLAMATION SCHEDULE

Reclamation work will commence within one year of the following fall season, to achieve best results by having the site prepped by late fall/early winter. Site revegetation monitoring will commence the Spring of year 1 (second spring, not year 0 which is first spring) following reclamation work and be annually inspected for erosion, invasive species, and vegetative coverage. Once the reclamation treatments have been implemented, those treatments will be monitored until performance standards have been met. The monitoring plan is designed to evaluate site-specific criteria for slope stability, erosion/sediment control, and revegetation.

4.4.0 POST MINING TOPOGRAPHY

Plan Sheet L-3 depicts the post-mining and reclaimed topography for the mined area. The final site configuration will, in general, be a rounded, rectangular-shaped excavated pit, no greater than 40-feet deep from original grade, with side slopes no steeper than 3:1 (H:V). The entry road to the pit will be blocked with soil berms and ripped for decompaction, seeded, and revegetated to blend with the surrounding topography. Stockpiled topsoil and vegetative debris (termed "duff''), and fines will be applied to the final pit slopes. Wind dispersed seeds from the surrounding undisturbed vegetation will aid in revegetation efforts.

4.4.1 Slope Stability

Pit slopes for the mining phases and the final reclaimed site will not be steeper than 3:1 (H:V), or 18°. The angle of repose of the loose stockpile material on the site is approximately 32°. For the final 3:1 (H:V) pit slopes, a static factor of safety of 1.9 is calculated. Thus, pit slopes will be stable at the proposed angle under static conditions. However, depending on the conditions of the sediment exposed on the slope (moisture content, vegetation cover, compaction, etc.), portions of the pit slope could experience surficial failure due to seismic loading from a maximum credible earthquake on one of the active faults in the area. Any slope failures will be retained within the pit.

4.4.2 Final Drainage Plan and Impoundments

Plan Sheet L-3 details the final drainage plan of the reclaimed site.

4.4.3 Disposition of Equipment

Any equipment brought onto the site will be removed following termination of mining activity. No equipment will be stored on the site following the end of Phase II.

4.5.0 RESOILING

The native soil of this site is very sandy to course material (gravel or larger), and the topsoil contains native seeds and microorganisms. The upper six inches of soil, defined as topsoil, will

be salvaged and treated as a valuable resource for revegetation. Duff is defined as the topsoil and the vegetative material. Prior to mining any area that has not been previously mined, the top six inches of the native surface and any existing woody material will be scraped off and stored as topsoil berms within the buffer zone at the top of the excavation slopes (Plan Sheet L-2). Harvest and stockpile options for the vegetation are to: (1) keep separate from the native soil, (2) concurrently harvest and stockpile with the native soil, or (3) mix with the topsoil via hydroxide, chopping, breaking, or chipping.

Native surface material stored in the topsoil berms, at the top of the excavation slopes, will be kept separate from the processing and sedimentation pond fines storage areas. The native material will be spread on the slopes first, with the remaining material, if any, spread on the pit bottom. The remaining areas will receive processing and sedimentation pond fines.

Prior to spreading the stored topsoil and fines, all compacted areas will be de-compacted (ripped or disked to facilitate root growth. The topsoil that was stockpiled or windrowed, on the sides of the pit, will then be re-spread over the disturbed slopes and roughened to form a variety of microsites. This can be accomplished by rough grading, imprinting, or other suitable methods.

4.6.0 REVEGETATION

Revegetation treatments of the site will strive to achieve visual integration with the surrounding vegetation and provide wildlife habitat. Decompaction, topsoil spreading, surface roughening, and seeding of the site will take place during the fall, from late October to December. The primary access road connecting the pit to SR 168 will be decommissioned (earthen berms near the entrance from SR 168 to deter vehicular access and heavy ripping of the road bead) once all site work has been completed.

4.6.1 Seedbed Preparation

After re-spreading of the topsoil, duff, or fines, the area will be roughened to form a variety of microsites; this can be accomplished by heavy ripping the site, track walking, or imprinting. The growth media will be prepared to provide a firm, but not overly compacted seedbed.

4.6.2 Seedmix Sources & Methods

Many plant species are comprised of local ecotypes that are highly adapted to the local climate and edaphic conditions (Plummer et al. 1955, 1968). The plants that will have the best chance of survival on a site are those ecotypes that are growing on (or near) the site. Besides the problem of purchasing a less adaptive ecotype, one could also cause genetic contamination of the local ecotype through interbreeding with an introduced ecotype. Commercially available seeds often contain small amounts of invasive and/or exotic species. This site has only one sparsely dispersed invasive, Russian thistle (*Salsola tragus*), and the introduction of other invasive/exotic species would reduce the quality of revegetation efforts. The best policy is to use seeds from on or near the site.

The first method of gathering seed would be the storing of topsoil in berms adjacent to the site. Once the berms are in place, they will be left undisturbed until final reclamation activities. It is estimated that the topsoil berms will be in place for several years to decades. Native plants will continue to grow and add to the seed bank at these berms.

The second method will rely on the various wind dispersed seeds from the surrounding undisturbed landscape. Most plant species observed at the site rely on wind dispersal to propagate seeds. The heavy roughening of slopes, like linear crevices at the site, would be the primary method in capturing wind dispersed seeds. Previous site records of mining and reclamation indicated that the site was not previously seeded (15 years ago), while native species have reestablished themselves with great success on the previously disturbed slopes and pit floor despite continued recreational and illegal dumping uses of the site.

If vegetation success criteria are not met by method 1 or 2, then hand gathered seeds, from the surrounding undisturbed landscape, will be broadcast and mixed into the top ½-inch of the substrate, either by raking or dragging a chain across the seedbed (or other suitable method). Permission from the landowner (BLM) would be required prior to this activity. Difficulties in gathering multiple species, over several blooming seasons, with extremely low plant cover makes this method the least practical of the three options. However, if seed gathering is necessitated, consultation with BLM will begin several years before to develop a targeted seed gathering strategy for local dominant species within the 54.3-acre boundary of the BLM easement. This will likely require two seasons of targeted species seed gathering by hand during the peak blooming period.

4.6.4 Mulches

Topsoil berms and existing plants growing on the berms will be the primary source of vegetative debris. The linear crevices, created by roughing of the slopes, will capture the wind-blown fines, seeds, precipitation, and minor surface runoff.

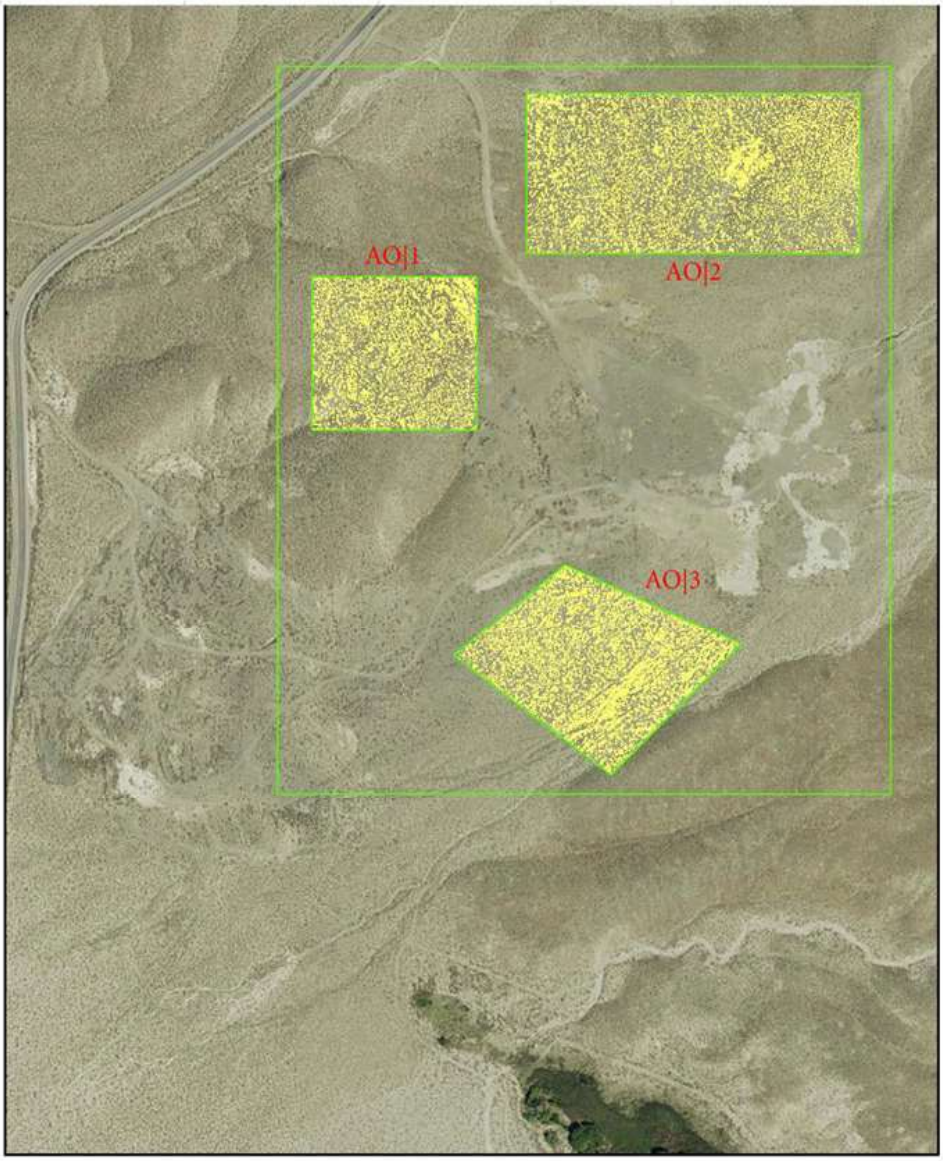
No imported mulching material will be used at this site since it would not be compatible with the native alkaline soil types.

4.6.5 Irrigation

The use of irrigation on this site would likely aid germination; however, it would also encourage growth of weedy species, thereby increasing the competitive advantage of the weedy, exotic species, such as Russian thistle. Therefore, irrigation is not recommended for this site. Instead, roughing of slopes in a linear pattern that slows and gathers precipitation runoff would aid in plant establishment. Existing site conditions, as seen in site AO|3 of Figure 5, the vegetation cover analysis, show higher density plant coverage along the drainage and natural, lowland areas (Towill, 2017).

FIGURE 5: DRONE VEGETATION SURVEY OF PROJECT SITE

Vegetation Analysis				
sUAS System:	senseFly eBee Plus Small Unmanned Aerial System with 20 MP S.O.D.A. Camera			
Date of Photography:	November 8, 2017			
Flight Altitude:	354' AMT			
Vegetation Cover Analysis				
Site	Square Feet		Percent of Veg. Cover	Confidence (Based on Stereo Assessment
	Planimetric Area	Vegetation Cover 0.2' or higher		
Full Area	3,040,000	767,549	25.25%	75%
AOI1	172,000	40,282	23.42%	95%
AOI2	365,400	74,120	20.28%	95%
AOI3	208,050	67,405	32.40%	95%



4.6.6 Plant Protection Measures

No protection will be provided for the seeded areas, except as a remedial measure. Though the final site measures will attempt to block vehicle entry to the site, which would have a negative impact on revegetation efforts.

4.6.7 Plant Eradication Measures

If Russian thistle invades revegetated areas to the point that it is impacting the germination and/or growth of desired species, then this invasive exotic will be manually removed from the site as a primary remedial measure. A secondary remedial measure of herbicide spraying to contain large Russian Thistle blooms, while still young, may be requested of BLM if deemed a necessary control measure beyond hand pulling.

4.7.0 EROSION AND SEDIMENT CONTROL

Erosion and sediment control will be achieved by implementation of the previously described plan sheets and revegetation plans. Earthen berms will be maintained to prevent intrusive runoff and erosion from the two adjacent drainage channels and to maintain internal settling basins. Re-soiling and reseeding will be performed according to the revegetation plan. Existing site conditions do indicate erosion rills as a natural occurrence for the site and surrounding area, which provides blending with the surrounding arid landscape.

4.8.0 PUBLIC SAFETY

The configuration of the mined lands will not pose a hazard to the public. Hazardous materials associated with mining and processing will be stored properly on site; and prior to reclamation, will be disposed of properly off-site. The steep slopes of the wave-cut terraces, as well as other steep slopes both on- and off-site, are natural features.

4.9.0 PERFORMANCE STANDARDS

The following discussion sets forth minimum site criteria, or performance standards, for the various aspects of site reclamation. Monitoring of reclamation performance standards will be conducted by a qualified individual or group of individuals, agreed upon by Caltrans and Inyo County.

4.9.1 Erosion and Sediment Control

Erosion and sediment control monitoring will be completed at the same time and frequency as the vegetation monitoring. The results will aid in identifying potential failure areas in need of remedial measures before the problem areas cause widespread failures. The benefits to remediating erosion should be weighed verses the potential impacts to site vegetation establishment if heavy equipment access to the site is deemed necessary. A net positive results of site benefits should be assumed for such remediation to be deemed necessary.

Sedimentation basins will be inspected following the season's first major storm event or at a minimum of annually. Basins will be cleaned out as needed to maintain a minimum storage capacity.

4.9.2 Slope Stability

No large man-made slope shall be steeper than 3:1 (H: V), which has been determined to exceed the slope stability standard for this material for all except the most severe earthquake events.

4.9.3 Revegetation

Undisturbed site-indigenous shrub cover was surveyed and concluded to be 25% (Towill, 2017). Reclamation will strive to achieve 12.5% (50% of baseline conditions) indigenous shrub cover. Aerial site surveys will be used to verify plant cover for the site annually during the reclamation phase. Species richness surveys conducted on the undisturbed area planned for mining showed a richness of three species per 50 square meters (see Table 2.5.1.1 and Table 4.9.3.1). Reclamation will also strive to achieve a species richness of three per 50 square meters.

Since the site was previously mined and subsequently naturally revegetated with native species, site conditions provide solid evidence that nearby native species seeding will naturally occur given time. By far the dominant species indicated during vegetation surveys was Shadscale (Atriplex confertifolia), which is covering the pit floor and surrounding slopes despite no decompaction or soil preparations measures. Other dominant species are indicated in the table below.

Table 4.9.3.1- Species Survey #2

Survey:	2		
Surveyors:	D. Aalbu, L. Morris, F. Becket		
Date:	2/24/2022		
Time:	3-4 PM		
Weather:			
Flora Observed			
Type	**Scientific Name**	**Common Name**	**If Dominant, then Y**
Shrubs	Atriplex confertifolia	Shadscale	Y(1)
	Psorothamnus arborescens	Mojave Indigo bush	Y(2)
	Artemisia spinescens	Budsage	Y(3)
	Ephedra nevadensis	Nevada Ephedra	
	Ericameria teretifolia	Green rabbitbrush	
	Krascheninnikovia lanata	Winterfat	
	Menodora spinescens	Spiny desert olive	Y(4)
	Sarcobatus vermiculatus	Greasewood	
	Ephedra viridis	Morman Tea	

4.10.0 MAINTENANCE, MONITORING, AND REDMEDIAL MEASURES

Site maintenance and monitoring will continue until Inyo County deems reclamation complete.

4.10.1 Erosion and Sediment Control

All erosion and sediment control structures will be maintained and monitored for as long as mining and reclamation continues. This will ensure that the failure of one or more structures does not apply additional and unplanned stress on other structures. If infilling or failure of a structure occurs, steps to repair the original structure will be taken.

4.10.2 Slope Stability

All slopes will be assessed, during annual monitoring, to ensure that they are stable. If excess slope erosion is observed, or failures noted, the appropriate remedial measures will be implemented. All pit slopes will be no greater than 3:1 (H: V).

4.10.3 Revegetation

Revegetation of the site will be monitored following implementation of each phase. Monitoring activities will take place during the peak flowering season, approximately April to June. Once the monitoring date is set, monitoring of the site, during the subsequent years, will occur within 30 days of that original date. This scheme will assure that the data will be comparable over time.

Revegetation monitoring will consist of visual assessments and recording the progress of reclamation with photographs. Overall vegetative coverage will be calculated by use of high-quality aerial photography analysis with an 80% or greater confidence level. Species richness data will be gathered by way of 50-meter belt transects. If it appears that the site will not meet the performance standards, then the investigator shall suggest remedial measures. Appropriate remedial measures are listed in Table 4.10.3 – Remedial Measures.

4.11.0 REPORTING

Once the reclamation activities have been completed, monitoring activities will commence and will continue until the performance standards have been met. This annual report will, at a minimum, consist of the name and credentials of the investigator(s), a summary, the date of the visit(s), the methods and materials used, the data collected, an analysis of the data and performance standards, and any suggested remedial measures. I final inspection request will be submitted to the County once survey data supports that the reclamation success criteria have been achieved.

5.0.0 COST OF RECLAMATION

See the Financial Assurance Cost Estimate, Appendix E.

TABLE 4.10.3- REMEDIAL MEASURES

FEATURE	OBJECTIVES	MONITORING FREQUENCY	FINDINGS	ACTION
Wind Erosion	Soil stabilized, no nuisance dust from site	Continuously during mining and reclamation implementation; annually following reclamation	Soil drifts found behind plants and rises, blowing dust	Consider additional soil stabilization (i.e. rock mulching)
Water Erosion	Soil stabilized, no evidence of riling or gullying equal to or greater than a Class 3	After first major storm event (>0.5-inch rain in a 24-hour period) following construction; annual monitoring of reclamation	Riling or gullying or erosion judged to be excessive	Repair area; consider additional stabilization (water bars, berms, diversion channels, or rock lining)
Slope Stability	No evidence of slope failures	Monitor continuously during mining operations; and annually during reclamation	Slope failures, slumping	Reconstruct slope, lessen angle of slope, and implement erosion control measures
Sedimentation	Little accumulation of sediment in basins (pit); basins maintain adequate capacity	After first major storm event (>0.5-inch rain in a 24-your period) following construction; annually during reclamation	Sedimentation basins filling up; diminished capacity	Clean out basin; analyze watershed for source of sediment; implement erosion control measures to correct problem
Invasion by Russian thistle or other invasive exotics	No interference with establishment of native vegetation	Once per year, note areas of infestation of Russian Thistle or other species	Infestation of exotics interfering with establishment of native vegetation	Apply weed eradication measures by hand-pulling and hand- culling
Revegetation	Perennial density averages 0.16%	Annually following implementation	Significantly below objectives	Consider reseeding; analyze soil for problems
Re-soiling	De-compacted native soils or fines re-spread to a depth of 6 inches	Monitor during implementation	Fines absent from substrate surface or a compacted substrate	Re-spread additional fines; rip or disc site to alleviate compaction

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MATERIAL SITE 308 (ID #91-14-0143)

12/12/2022

Operations Plan / Project Description

Caltrans District 9 is proposing to establish a new material site in northern Inyo County. Mining operations would encompass approximately 14 acres with the approval of a new SMARA reclamation plan and associated operations plan.

Material Site 308 (ID #91-14-0143)

OPERATIONS PLAN / PROJECT DESCRIPTION

Background

With limited available aggregate sources statewide, including from within the Caltrans District 9 area, there is a need to establish a new, strategically located material site in northern Inyo County. The location of this proposed material site would supply an area currently absent of active material sites. Maintenance has identified a need for the shale material at this location for use in highway maintenance work and utilization of the site for material storage (sand, rock, gravel, soil debris from flooding, etc.). Caltrans historic mining production logs show an average use of 5,000 cubic yards (CY) annually, which can greatly increase during big desert storm years. Commercially available equivalent material in northern Inyo County is limited, which makes hauling in commercially purchased material cost prohibitive and inconsistent. Establishment of this site would avoid dependency on the uncertain supply of private commercial sources and long hauling distances.

The proposed site is on Bureau of Land Management (BLM) land, near Big Pine, California. The proposed site encompasses 54.3 acres, of which 14 acres will be mined in two phases, to a depth no greater than 37 feet below existing grade. The current boundary also includes a storage and operations area within the pit's bottom floor. The new site boundary will be clearly delineated with metal posts, survey markers, and material site boundary signs.

Day One Operations (post reclamation plan and operations plan approval)

A 20-foot offset boundary will be clearly demarcated with metal stakes to ensure a buffer from the surrounding, undisturbed terrain and to provide a visual cue for excavation activities. The previously rehabilitated dirt access road will be graded and restored to connect the northwestern edge of the material site with State Route 168 East. A metal access gate will then be installed to ensure no trespassing. In addition, an earthen berm will be established to prevent access via an existing road connecting with the southwestern boundary of the pit. Existing debris (illegal dumping deposits) on site will be cleaned up and hauled off and disposed of at an appropriate landfill facility. To avoid any impacts to the northern sagebrush lizard, focused reptile surveys will be conducted within the BSA prior to the start of mining operations. If any northern sagebrush lizard individuals are observed, the BLM will be consulted with to determine appropriate avoidance and minimization measures. Phase I area duff/topsoil, approximately six inches in depth, will be relocated to the outermost edges of the pit, within the 20-foot buffer zone. Maintenance personnel will be trained on operations plan and methods for which to operate on the site in accordance with the approved SMARA reclamation plan.

General Operational Strategies

- All phases of operation will ensure that the site remains internally draining, with final slope configurations of 3 (horizontal) to 1 (vertical) or flatter.
- The proposed extraction plan is not expected to encounter groundwater.
- During material extraction operations, duff/topsoil (the top 6 inches) will be stockpiled for reclamation activities in the outer perimeter (20-foot buffer zone).

- Slopes will be contoured to a final grade (3:1 or flatter) and slope re-vegetation will commence at the end of phase II.
- During both mining phases the pit floor will have a maintained grade to allow for drainage into the pit's sediment basin.
- The primary use of the site will be for Caltrans standard maintenance and operations, including:
    - Material mining, sorting, and stockpiling for use in routine and emergency maintenance activities on the State Highway System.
    - Caltrans Maintenance Forces will perform mining activities mostly with graders, loaders, dozers, and sorting grizzlies.
    - Only reusable imported natural materials, such as dirt and rock, collected from highway clean-up or Caltrans Construction activities, will be stored at the site. No recycled asphalt pavement type materials will be stored on site. All other non-reusable materials will be disposed of elsewhere, likely a county landfill.
- A secondary use of the site will be to provide Caltrans construction contractors with a staging area for nearby projects. Contractors sometimes need an area off the highway to temporarily store construction equipment and materials. This will only occur in the self-contained pit bottom.
- After completion of Phase II mining operations, stockpiled topsoil will be spread on the final slopes, pit floor and dirt access road to enhance slope naturalization/re-vegetation.
- It is Caltrans' intent to rescind the fully reclaimed material site (including the entire 54.3-acre acquisition) back to the Bureau of Land Management, once mining is concluded.

Mining Phases:

Phase I

Phase I of mining will entail excavating the surface of the entire pit to varying depths, ranging from 4 feet to 20 feet (from original grade), with maximum depth trending towards the northern edge. A bench with a drainage channel will be established along the northeastern portion of the pit as the depth develops to intercept offsite runoff and channel to detention basin. Once phase 1 final depth has been achieved, the pit floor will be graded to ensure drainage to the sediment basin (southern corner of the pit floor). There is an estimated 79,000 cubic yards (CY) of raw material to be excavated during Phase I. With an estimated 5,000 CY/year average demand, this phase will last approximately 16 years.

Reference plan sheet L-2 for details.

Topsoil, approximately six inches in depth, will be stockpiled for reclamation activities in the outer perimeter (20-foot buffer zone).

Phase II

Phase II of mining will continue excavating the surface of the entire pit to varying depths, ranging from 24 feet to 37 feet (from original grade), with maximum depth trending towards the northern edge. Upon completion of the extraction of all material to the grade lines as shown on the plan sheet L-3, the final 3:1 slopes will be reclaimed in accordance with the approved reclamation plan. Topsoil stockpiles will then be spread evenly on all slopes and the pit floor.

This phase contains approximately 215,000 CY of raw material. Estimating 5,000/year average demand, this phase will provide a 43 year's supply of aggregate.

Final Configuration

As mentioned in the General Operations Strategies, it is Caltrans' intent to rescind the fully reclaimed material site (including the entire 54.3-acre acquisition) back to the Bureau of Land Management. Once the pit has met the reclamation success criteria conditions per the reclamation plan and returned to a land use designation of open space (natural resources), a final site inspection will be performed with Inyo County. After BLM concurs with Inyo County's finding of full reclamation, the associated mine ID will be retired. At this point, no further mining activities will occur at the site.

Since the operations plan for mining is based on estimates for extraction, it is also estimated that the final site configuration will likely not be realized for up to 59 years.

Please refer to the associated plan sheets for further details, as well as the approved reclamation plan.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Iny	168	21.6	1	9

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN INYO COUNTY
NEAR BIG PINE AT 3.2 MILES
EAST OF SOUTH JUNCTION ROUTE 395

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2024

INDEX OF PLANS

SHEET No	DESCRIPTION
1	TITLE AND LOCATION MAP
2-5	LAYOUTS
6-9	CROSS SECTIONS

MINE:
ZURICH PIT

MINERAL:
SAND AND GRAVEL (SHALE)

MINE OPERATOR:
CALTRANS
500 S. MAIN STREET, BISHOP CA 93514

LANDOWNER:
BUREAU OF LAND MANAGEMENT
351 PACU LANE, SUITE 100, BISHOP CA 93514

APPLICANT/OWNER OF MINERAL RIGHTS:
CALTRANS
500 S. MAIN STREET, BISHOP CA 93514

REPRESENTATIVE:
CALTRANS, FOREST BECKET
500 S. MAIN STREET, BISHOP CA 93514
(760) 874-8315

LAND SURVEYOR:
CALTRANS, SEREYNA CAGLE
500 S. MAIN STREET, BISHOP CA 93514
(760) 937-3531

GEOLOGIST:
CALTRANS, LANA MORRIS
500 S. MAIN STREET, BISHOP CA 93514
(760) 874-8328

BIOLOGIST:
CALTRANS, KRIS BASON
500 S. MAIN STREET, BISHOP CA 93514
(760) 784-4056

UTILITIES:
WATER WILL BE HAULED IN AS NEEDED.
SEWAGE: NO TEMPORARY PORTA POTTY ON SITE

GENERAL LAND DESIGNATION:
ZONING - NATURAL RESOURCES OPEN SPACE
APN - 0180701000

GRADING AREA:
TOTAL MATERIAL SITE = 54.3 ACRES
AREA OF DISTURBANCE (MINING) = 14.0 ACRES

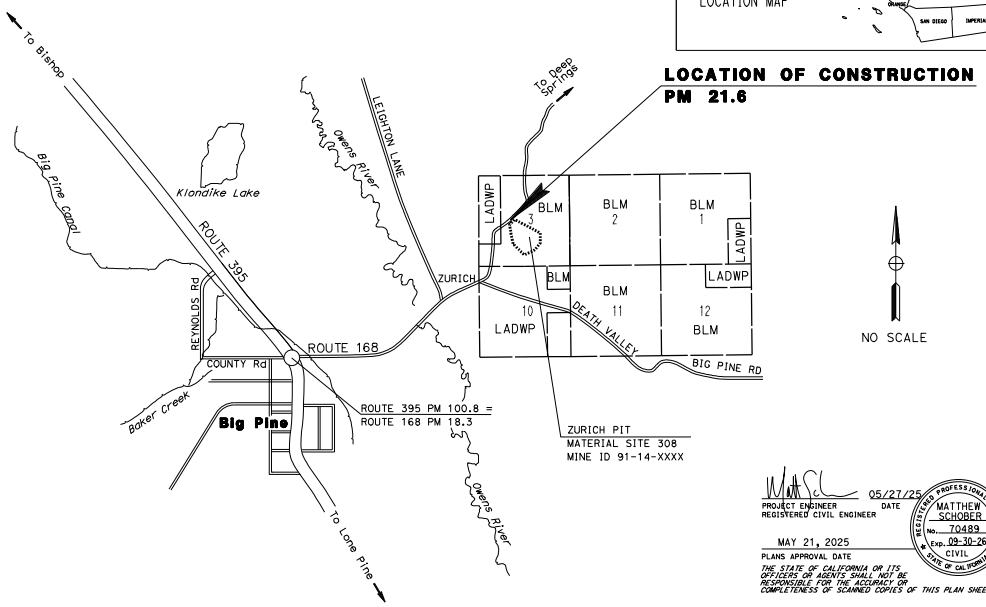
SIGNS:
THE NEW SITE BOUNDARY WILL BE CLEARLY DELINEATED WITH METAL POSTS, SURVEY MARKERS, AND MATERIAL SITE BOUNDARY SIGNS.

STRUCTURES:
NO STRUCTURES WITHIN 20 FEET OF THE PROJECT PROPERTY LINE

EXCAVATION SLOPES:
QUARRY: 14 ACRES MINED IN TWO PHASES, TO A DEPTH NO GREATER THAN 37 FT BELOW EXISTING GRADE.
SLOPES: WILL NOT EXCEED 3:1 (H:V), OR 18 DEGREES
STOCKPILES: TOPSOIL WILL BE STOCKPILED WITHIN THE 20 FT BUFFER ZONE FOR RECLAMATION.
ESTIMATED OPERATING LIFE: PHASE 1 ESTIMATED TO SPAN APPROX. 16 YEARS AND PHASE 2 APPROX. 43 YEARS.
PRODUCTION: TOTAL ESTIMATED PRODUCTION VOLUME OF 294,000 CY

PUBLIC SAFETY:
SLOPES WILL BE MAXIMUM 3:1 (H:V) WITHOUT SIGNIFICANT DROPS IN ELEVATION FOR OFF ROAD VEHICLE SAFETY.
EXISTING ROAD WILL BE RE-GRADED.

LEGAL DESCRIPTION:
TOWNSHIP 9 SOUTH, RANGE 34 EAST, SECTION 3



05/27/25
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

MAY 21, 2025
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — MATTHEW SCHOBER — No. 70489 — Exp. 09-30-26 — CIVIL — STATE OF CALIFORNIA

CONTRACT No.	09-373204
PROJECT ID	0917000072

DESIGN MANAGER: BRIAN WESLING
PROJECT MANAGER: FOREST BECKET

DATE PLOTTED => 27-MAY-2025
TIME PLOTTED => 16:11
USER NAME => s148041
DATE REVISED 05/21/25

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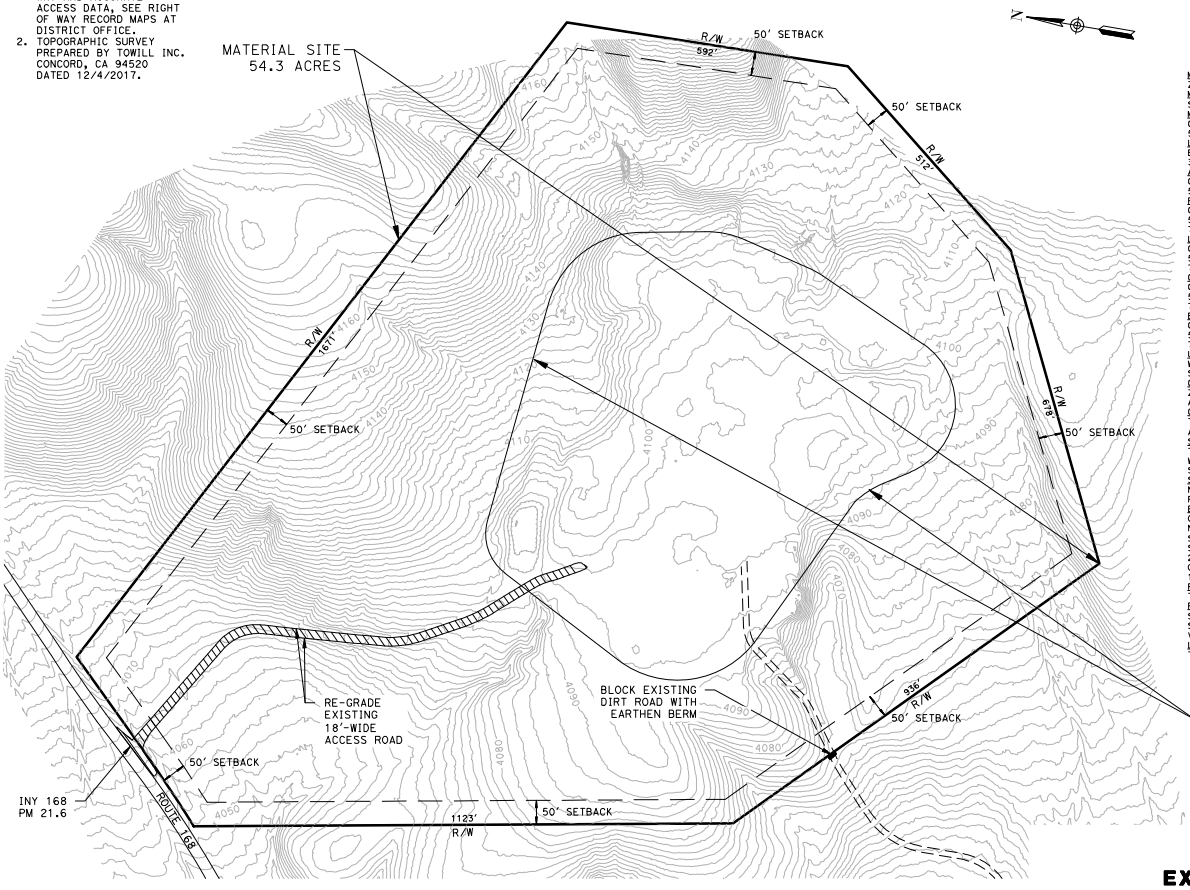
NOTES:
1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. TOPOGRAPHIC SURVEY PREPARED BY TOWILL INC. CONCORD, CA 94520 DATED 12/4/2017.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Iny	168	21.6	2	9

05/21/25
REGISTERED CIVIL ENGINEER DATE

05/21/25
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
MATTHEW SCHOBER
No. 70489
Exp. 9-30-26
CIVIL
STATE OF CALIFORNIA

MINE:
ZURICH PIT
MINERAL:
SAND AND GRAVEL (SHALE)
MINE OPERATOR:
CALTRANS
500 S. MAIN STREET, BISHOP CA 93514
LANDOWNER:
BUREAU OF LAND MANAGEMENT
351 PACU LANE, SUITE 100, BISHOP CA 93514
APPLICANT/OWNER OF MINERAL RIGHTS:
CALTRANS
500 S. MAIN STREET, BISHOP CA 93514
REPRESENTATIVE:
CALTRANS, FOREST BECKET
500 S. MAIN STREET, BISHOP CA 93514
760-874-8319
LAND SURVEYOR:
CALTRANS, SEREYNA CAGLE
500 S. MAIN STREET, BISHOP CA 93514
760-937-3531
GEOLOGIST:
CALTRANS, LANA MORRIS
500 S. MAIN STREET, BISHOP CA 93514
760-874-8328
BIOLOGIST:
CALTRANS, KRIS BASON
500 S. MAIN STREET, BISHOP CA 93514
760-784-4056
UTILITIES:
WATER WILL BE HAULED IN AS NEEDED.
SEWAGE: NO TEMPORARY PORTA POTTY ON SITE
GENERAL LAND DESIGNATION:
ZONING - NATURAL RESOURCES OPEN SPACE
APN - 0180701000
GRADING AREA:
TOTAL MATERIAL SITE = 54.3 ACRES
AREA OF DISTURBANCE (MINING) = 14.0 ACRES
SIGNS:
THE NEW SITE BOUNDARY WILL BE CLEARLY DELINEATED WITH METAL POSTS, SURVEY MARKERS, AND MATERIAL SITE BOUNDARY SIGNS.
STRUCTURES:
NO STRUCTURES WITHIN 20 FEET OF THE PROJECT PROPERTY LINE
EXCAVATION SLOPES:
QUARRY: 14 ACRES MINED IN TWO PHASES, TO A DEPTH NO GREATER THAN 37 FT BELOW EXISTING GRADE.
SLOPES: WILL NOT EXCEED 3:1 (H:V), OR 18 DEGREES
STOCKPILES: TOPSOIL WILL BE STOCKPILED WITHIN THE 20 FT BUFFER ZONE FOR RECLAMATION. ESTIMATED OPERATING LIFE: PHASE 1 ESTIMATED TO SPAN APPROX. 16 YEARS AND PHASE 2 APPROX. 43 YEARS.
PRODUCTION:
TOTAL ESTIMATED PRODUCTION VOLUME OF 294,000 CY
PUBLIC SAFETY:
SLOPES WILL BE MAXIMUM 3:1 (H:V) WITHOUT SIGNIFICANT DROPS IN ELEVATION FOR OFF ROAD VEHICLE SAFETY. EXISTING ROAD WILL BE RE-GRADED.
LEGAL DESCRIPTION:
TOWNSHIP 9 SOUTH, RANGE 34 EAST, SECTION 3

EXISTING CONDITIONS

SCALE 1"=100' **L-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT COORDINATION
FUNCTIONAL SUPERVISOR: FOREST BECKET
CALCULATED-DESIGNED BY: MATT SCHOBER
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 21-May-2025
TIME PLOTTED => 16:13
12/07/22

BORDER LAST REVISED 7/2/2010
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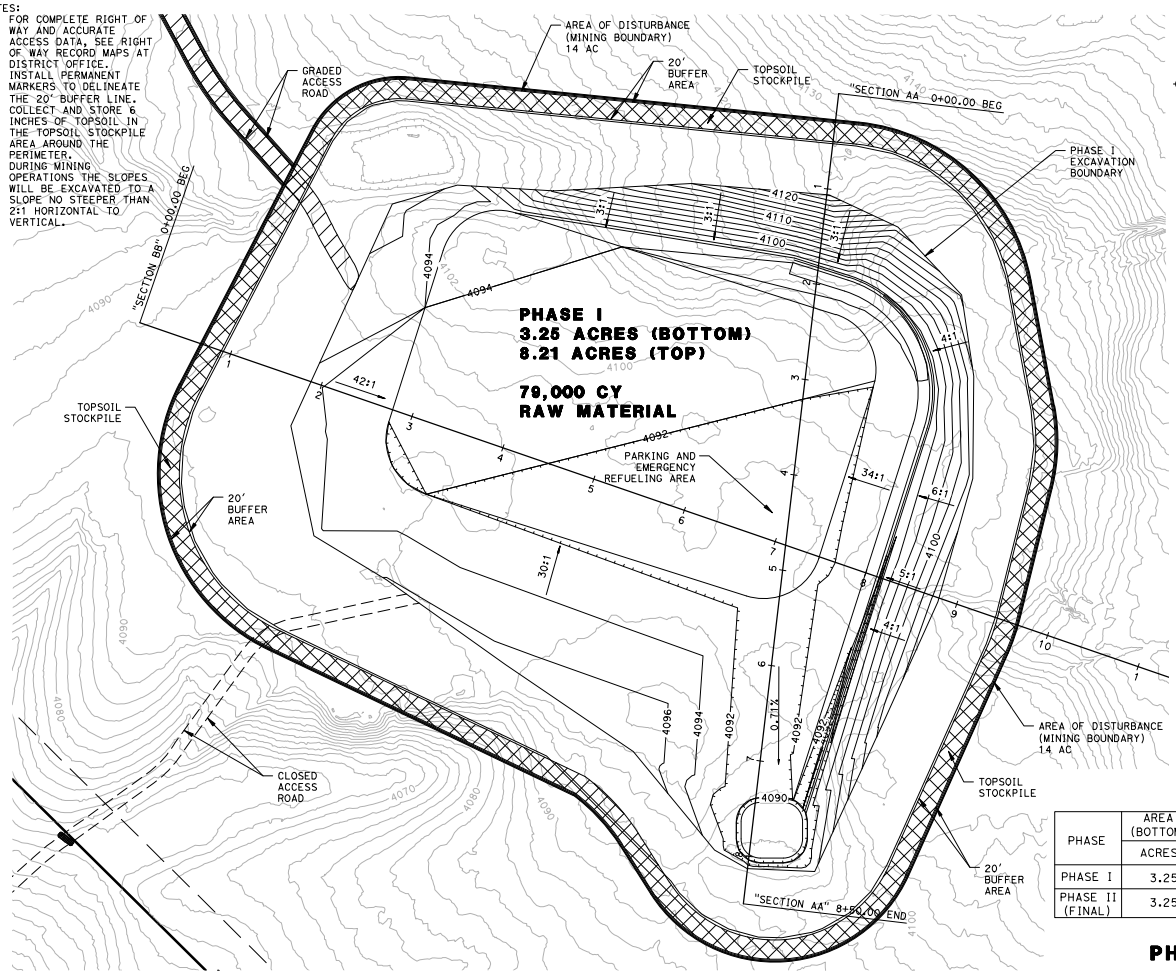
DGN FILE => 937320aa_FirstPhase.dwg
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2462
PROJECT NUMBER & PHASE 09170000721

NOTES:
1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. INSTALL PERMANENT MARKERS TO DELINEATE THE 20' BUFFER LINE.
3. COLLECT AND STORE 6 INCHES OF TOPSOIL IN THE TOPSOIL STOCKPILE AREA AROUND THE PERIMETER.
4. DURING MINING OPERATIONS THE SLOPES WILL BE EXCAVATED TO A SLOPE NO STEEPER THAN 2:1 HORIZONTAL TO VERTICAL.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Iny	168	21.6	3	9

REGISTERED CIVIL ENGINEER — DATE 05/21/25

PLANS APPROVAL DATE 05/21/25

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — MATTHEW SCHOBER — No. 70489 — Exp. 9-30-26 — CIVIL — STATE OF CALIFORNIA

MINE:
ZURICH PIT
MINERAL:
SAND AND GRAVEL (SHALE)
MINE OPERATOR:
CALTRANS
500 S. MAIN STREET, BISHOP CA 93514
LANDOWNER:
BUREAU OF LAND MANAGEMENT
351 PACU LANE, SUITE 100, BISHOP CA 93514
APPLICANT/OWNER OF MINERAL RIGHTS:
CALTRANS
500 S. MAIN STREET, BISHOP CA 93514
REPRESENTATIVE:
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760-874-8315
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760-874-8328
BIOLOGIST:
CALTRANS, KRIS BASON
500 S. MAIN STREET, BISHOP CA 93514
760-784-4056
UTILITIES:
WATER WILL BE HAULED IN AS NEEDED.
SEWAGE: NO TEMPORARY PORTA POTTY ON SITE
GENERAL LAND DESIGNATION:
ZONING - NATURAL RESOURCES OPEN SPACE
APN - 018070100O
GRADING AREA:
TOTAL MATERIAL SITE = 54.3 ACRES
AREA OF DISTURBANCE (MINING) = 14.0 ACRES
SIGNS:
THE NEW SITE BOUNDARY WILL BE CLEARLY DELINEATED WITH METAL POSTS, SURVEY MARKERS, AND MATERIAL SITE BOUNDARY SIGNS.
STRUCTURES:
NO STRUCTURES WITHIN 20 FEET OF THE PROJECT PROPERTY LINE
EXCAVATION SLOPES:
QUARRY: 14 ACRES MINED IN TWO PHASES, TO A DEPTH NO GREATER THAN 37 FT BELOW EXISTING GRADE.
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LEGAL DESCRIPTION:
TOWNSHIP 9 SOUTH, RANGE 34 EAST, SECTION 3

PHASE	AREA (BOTTOM) ACRES	AREA (TOP) ACRES	VOLUME CY	MAX DEPTH FT
PHASE I	3.25	8.21	79,000	20
PHASE II (FINAL)	3.25	12.53	215,000	37

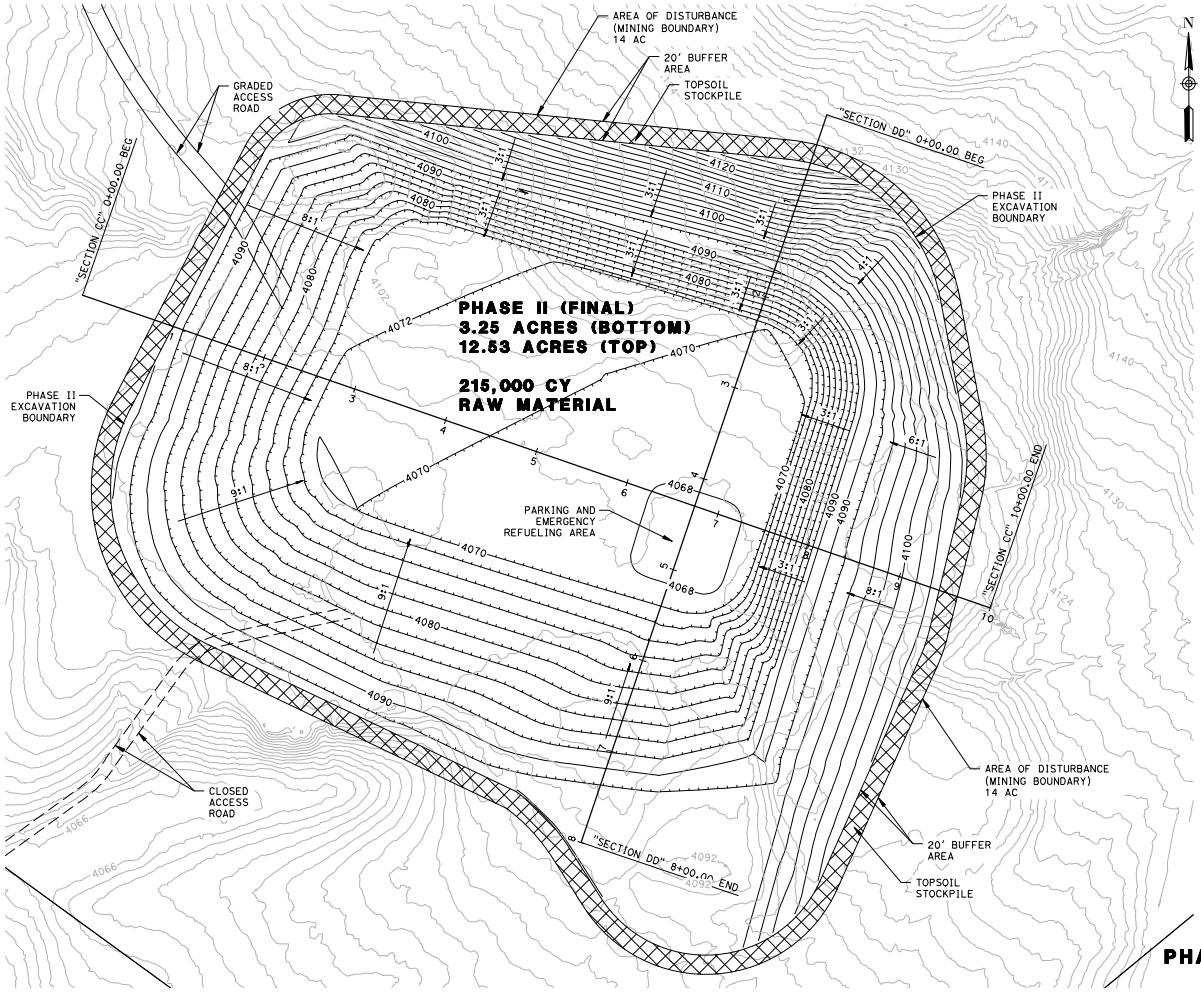
PHASE I GRADING PLAN

SCALE 1"=50' **L-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT COORDINATION
FUNCTIONAL SUPERVISOR: FOREST BECKET
CALCULATED-DESIGNED BY: MATT SCHOBER
CHECKED BY:
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 21-May-2025
TIME PLOTTED => 15:13

BORDER LAST REVISED 7/2/2010 | USERNAME => s148041 | DGN FILE => 937320aa_FirstPhase.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2462 | PROJECT NUMBER & PHASE 09170000721



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
09	Iny	168	21.6	4	9

REGISTERED CIVIL ENGINEER — DATE 05/21/25

MATTHEW SCHOBER No. 70489 Exp. 9-30-26 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE 05/21/25

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:
1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT DISTRICT OFFICE.
2. INSTALL PERMANENT MARKERS TO DELINEATE THE 20' BUFFER LINE.
3. COLLECT AND STORE 6 INCHES OF TOPSOIL IN THE TOPSOIL STOCKPILE AREA AROUND THE PERIMETER.
4. DURING MINING OPERATIONS THE SLOPES WILL BE EXCAVATED TO A SLOPE NO STEEPER THAN 2:1 HORIZONTAL TO VERTICAL.

MINE:
ZURICH PIT
MINERAL:
SAND AND GRAVEL (SHALE)
MINE OPERATOR:
CALTRANS
500 S. MAIN STREET, BISHOP CA 93514
LANDOWNER:
BUREAU OF LAND MANAGEMENT
351 PACU LANE, SUITE 100, BISHOP CA 93514
APPLICANT/OWNER OF MINERAL RIGHTS:
CALTRANS
500 S. MAIN STREET, BISHOP CA 93514
REPRESENTATIVE:
CALTRANS, FOREST BECKET
500 S. MAIN STREET, BISHOP CA 93514
760-874-8315
LAND SURVEYOR:
CALTRANS, SEREYNA CAGLE
500 S. MAIN STREET, BISHOP CA 93514
760-937-3531
GEOLOGIST:
CALTRANS, LANA MORRIS
500 S. MAIN STREET, BISHOP CA 93514
760-874-8328
BIOLOGIST:
CALTRANS, KRIS BASON
500 S. MAIN STREET, BISHOP CA 93514
760-784-4056
UTILITIES:
WATER WILL BE HAULED IN AS NEEDED.
SEWAGE: NO TEMPORARY PORTA POTTY ON SITE
GENERAL LAND DESIGNATION:
ZONING - NATURAL RESOURCES OPEN SPACE
APN - 018070100O
GRADING AREA:
TOTAL MATERIAL SITE = 54.26 ACRES
AREA OF DISTURBANCE (MINING) = 14 ACRES
SIGNS:
THE NEW SITE BOUNDARY WILL BE CLEARLY DELINEATED WITH METAL POSTS, SURVEY MARKERS, AND MATERIAL SITE BOUNDARY SIGNS.
STRUCTURES:
NO STRUCTURES WITHIN 20 FEET OF THE PROJECT PROPERTY LINE
EXCAVATION SLOPES:
QUARRY: 14 ACRES MINED IN TWO PHASES, TO A DEPTH NO GREATER THAN 37 FT BELOW EXISTING GRADE.
SLOPES: WILL NOT EXCEED 3:1 (H:V), OR 18 DEGREES
STOCKPILES: TOPSOIL WILL BE STOCKPILED WITHIN THE 20 FT BUFFER ZONE FOR RECLAMATION. ESTIMATED OPERATING LIFE: PHASE 1 ESTIMATED TO SPAN APPROX. 16 YEARS AND PHASE 2 APPROX. 43 YEARS.
PRODUCTION:
TOTAL ESTIMATED PRODUCTION VOLUME OF 294,000 CY
PUBLIC SAFETY:
SLOPES WILL BE MAXIMUM 3:1 (H:V) WITHOUT SIGNIFICANT DROPS IN ELEVATION FOR OFF ROAD VEHICLE SAFETY. EXISTING ROAD WILL BE RE-GRADED.
LEGAL DESCRIPTION:
TOWNSHIP 9 SOUTH, RANGE 34 EAST, SECTION 3

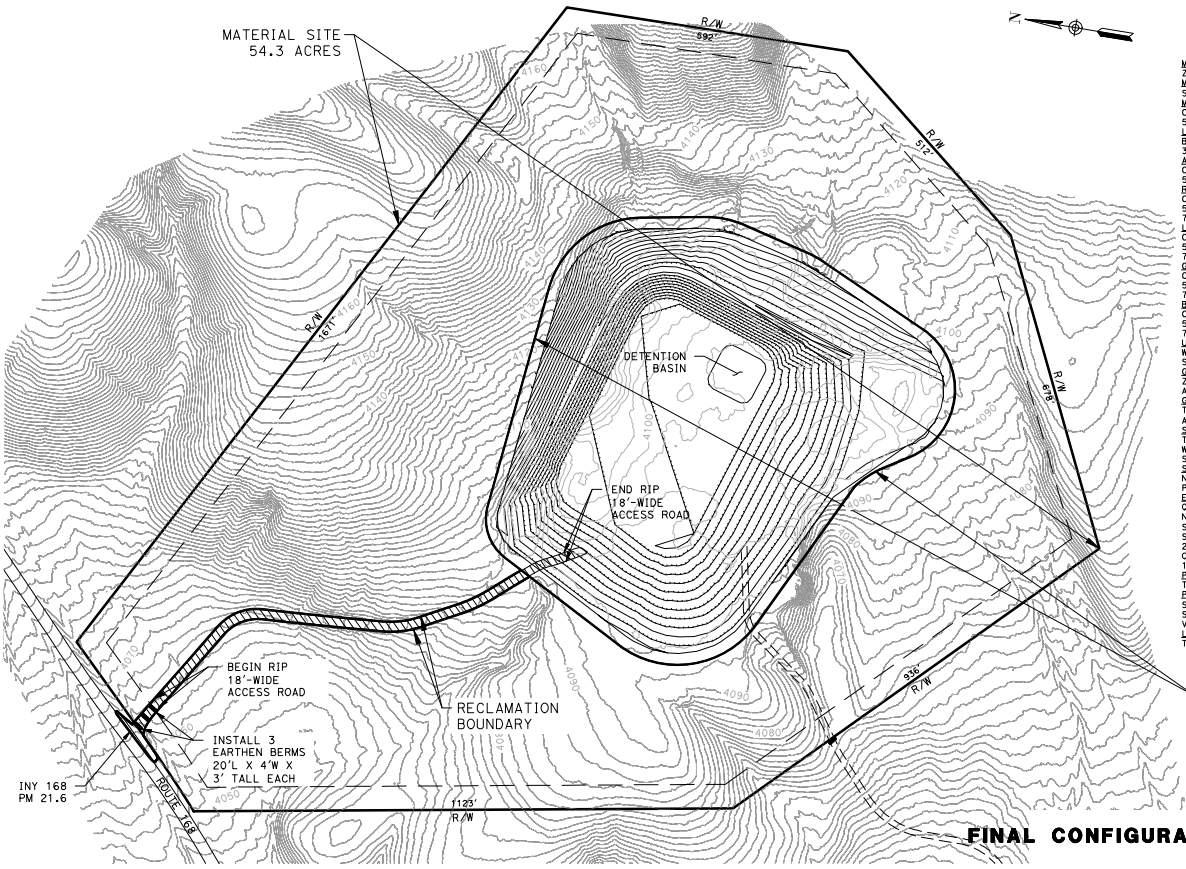
PHASE II GRADING PLAN

SCALE 1"=50' **L-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	DATE REVISED
Caltrans PROJECT COORDINATION	FOREST BECKET	CHECKED BY	MATT SCHOBER	

LAST REVISION 12/07/22 — DATE PLOTTED => 27-May-2025 — TIME PLOTTED => 16:13

BORDER LAST REVISED 7/2/2010 | USERNAME => s148041 | DGN FILE => 937320aa_FinalPhase.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2462 | PROJECT NUMBER & PHASE 09170000721



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Iny	168	21.6	5	9

05/21/25
REGISTERED CIVIL ENGINEER DATE

05/21/25
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
MATTHEW SCHOBER
No. 70489
Exp. 9-30-26
CIVIL
STATE OF CALIFORNIA

MINE:
ZURICH PIT
MINERAL:
SAND AND GRAVEL (SHALE)
MINE OPERATOR:
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500 S. MAIN STREET, BISHOP CA 93514
LANDOWNER:
BUREAU OF LAND MANAGEMENT
351 PACU LANE, SUITE 100, BISHOP CA 93514
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REPRESENTATIVE:
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760-937-3531
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500 S. MAIN STREET, BISHOP CA 93514
760-874-8328
BIOLOGIST:
CALTRANS, KRIS BASON
500 S. MAIN STREET, BISHOP CA 93514
760-784-4056
UTILITIES:
WATER WILL BE HAULED IN AS NEEDED.
SEWAGE: NO TEMPORARY PORTA POTTY ON SITE
GENERAL LAND DESIGNATION:
ZONING - NATURAL RESOURCES OPEN SPACE
APN - 018070100O
GRADING AREA:
TOTAL MATERIAL SITE = 54.3 ACRES
AREA OF DISTURBANCE (MINING) = 14.0 ACRES
SIGNS:
THE NEW SITE BOUNDARY WILL BE CLEARLY DELINEATED WITH METAL POSTS, SURVEY MARKERS, AND MATERIAL SITE BOUNDARY SIGNS.
STRUCTURES:
NO STRUCTURES WITHIN 20 FEET OF THE PROJECT PROPERTY LINE
EXCAVATION SLOPES:
QUARRY: 14 ACRES MINED IN TWO PHASES, TO A DEPTH NO GREATER THAN 37 FT BELOW EXISTING GRADE.
SLOPES: WILL NOT EXCEED 3:1 (H:V), OR 18 DEGREES
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PRODUCTION:
TOTAL ESTIMATED PRODUCTION VOLUME OF 294,000 CY
PUBLIC SAFETY:
SLOPES WILL BE MAXIMUM 3:1 (H:V) WITHOUT SIGNIFICANT DROPS IN ELEVATION FOR OFF ROAD VEHICLE SAFETY. EXISTING ROAD WILL BE RE-GRADED.
LEGAL DESCRIPTION:
TOWNSHIP 9 SOUTH, RANGE 34 EAST, SECTION 3

FINAL CONFIGURATION/ RECLAMATION LAYOUT

SCALE 1"=100' **L-4**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
PROJECT COORDINATION
FUNCTIONAL SUPERVISOR: FOREST BECKET
CALCULATED-DESIGNED BY: MATT SCHOBER
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 21-May-2025
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12/07/22

BORDER LAST REVISED 7/2/2010
USERNAME => s148041
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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2462
PROJECT NUMBER & PHASE 09170000721

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Iny	168	21.6	6	9

REGISTERED CIVIL ENGINEER — DATE 05/21/25

PLANS APPROVAL DATE 05/21/25

REGISTERED PROFESSIONAL ENGINEER — MATTHEW SCHOBER — No. 70489 — Exp. 9-30-26 — CIVIL — STATE OF CALIFORNIA

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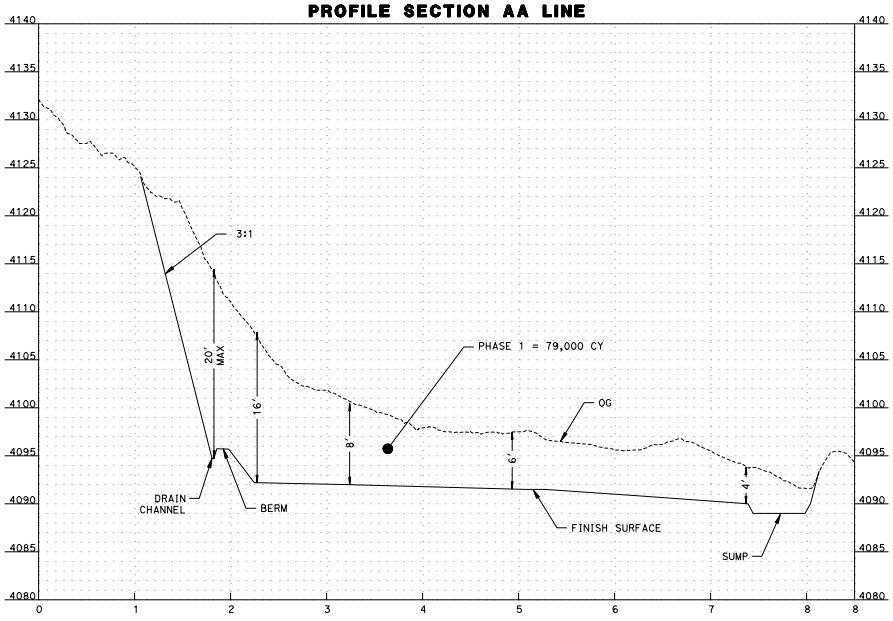
PROFILE SECTION AA LINE



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MINERAL:
SAND AND GRAVEL (SHALE)
MINE OPERATOR:
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500 S. MAIN STREET, BISHOP CA 93514
LANDOWNER:
BUREAU OF LAND MANAGEMENT
351 PACU LANE, SUITE 100, BISHOP CA 93514
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500 S. MAIN STREET, BISHOP CA 93514
REPRESENTATIVE:
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500 S. MAIN STREET, BISHOP CA 93514
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760-937-3531
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500 S. MAIN STREET, BISHOP CA 93514
760-874-8328
BIOLOGIST:
CALTRANS, KRIS BASON
500 S. MAIN STREET, BISHOP CA 93514
760-784-4056
UTILITIES:
WATER WILL BE HAULED IN AS NEEDED.
SEWAGE: NO TEMPORARY PORTA POTTY ON SITE
GENERAL LAND DESIGNATION:
ZONING - NATURAL RESOURCES OPEN SPACE
APN - 0180701000
GRADING AREA:
TOTAL MATERIAL SITE = 54.26 ACRES
AREA OF DISTURBANCE (MINING) = 14 ACRES
SIGNS:
THE NEW SITE BOUNDARY WILL BE CLEARLY DELINEATED WITH METAL POSTS, SURVEY MARKERS, AND MATERIAL SITE BOUNDARY SIGNS.
STRUCTURES:
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LEGAL DESCRIPTION:
TOWNSHIP 9 SOUTH, RANGE 34 EAST, SECTION 3

SCALE: Horiz 1" = 50'
Vert 1" = 5'

CONSTRUCTION DETAILS
C-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT COORDINATION
FUNCTIONAL SUPERVISOR: FOREST BECKET
CALCULATED-DESIGNED BY: MATT SCHOBER
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 21-May-2025
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12/07/22

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2462
PROJECT NUMBER & PHASE 09170000721

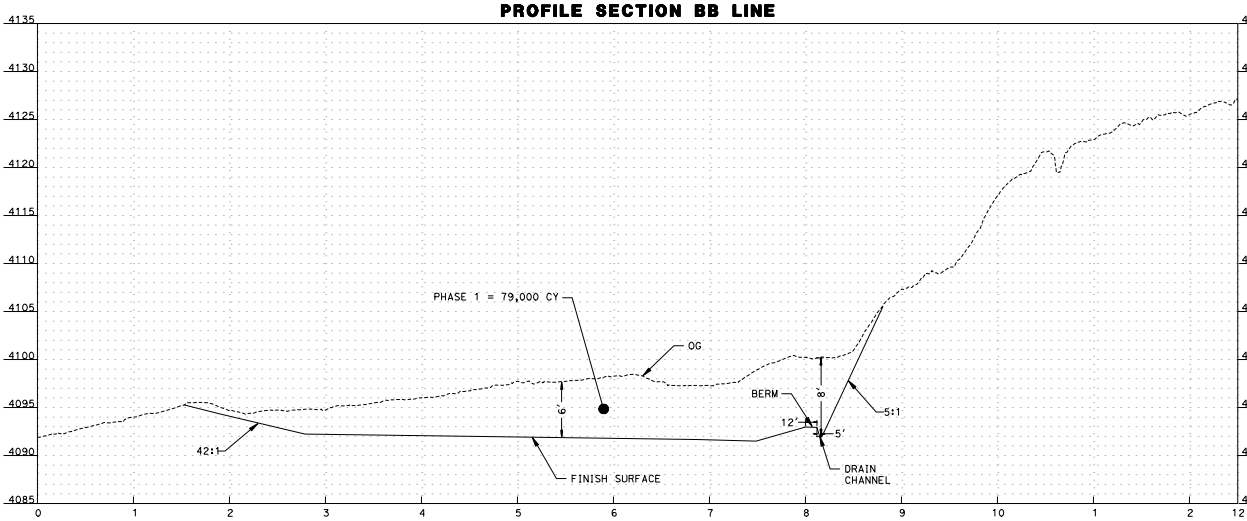
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
09	Iny	168	21.6	7	9

REGISTERED CIVIL ENGINEER — DATE 05/21/25

PLANS APPROVAL DATE 05/21/25

REGISTERED PROFESSIONAL ENGINEER — MATTHEW SCHOBER — No. 70489 — Exp. 9-30-26 — CIVIL — STATE OF CALIFORNIA

PROFILE SECTION BB LINE



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LEGAL DESCRIPTION:
TOWNSHIP 9 SOUTH, RANGE 34 EAST, SECTION 3

SCALE: Horiz 1" = 50'
Vert 1" = 5'

CONSTRUCTION DETAILS

SCALE 1"=50' **C-2**

LAST REVISION DATE PLOTTED => 21-May-2025
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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT COORDINATION
FUNCTIONAL SUPERVISOR: FOREST BECKET
CALCULATED-DESIGNED BY: MATT SCHOBER
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BORDER LAST REVISED 7/2/2010
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
09	Inyo	168	21.6	8	9

REGISTERED CIVIL ENGINEER — DATE 05/21/25

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REGISTERED PROFESSIONAL ENGINEER — MATTHEW SCHOBER — No. 70489 — Exp. 9-30-26 — CIVIL — STATE OF CALIFORNIA

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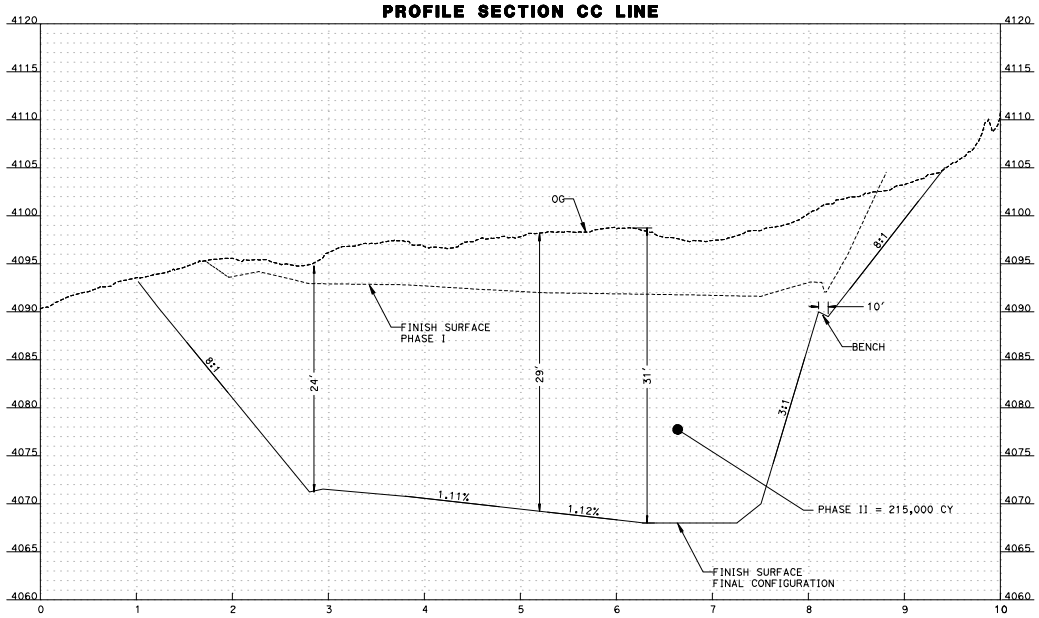
PROFILE SECTION CC LINE



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LEGAL DESCRIPTION:
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SCALE: Horiz 1" = 50'
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CONSTRUCTION DETAILS
C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
PROJECT COORDINATION
FUNCTIONAL SUPERVISOR: FOREST BECKET
CALCULATED-DESIGNED BY: MATT SCHOBER
CHECKED BY
REVISED BY
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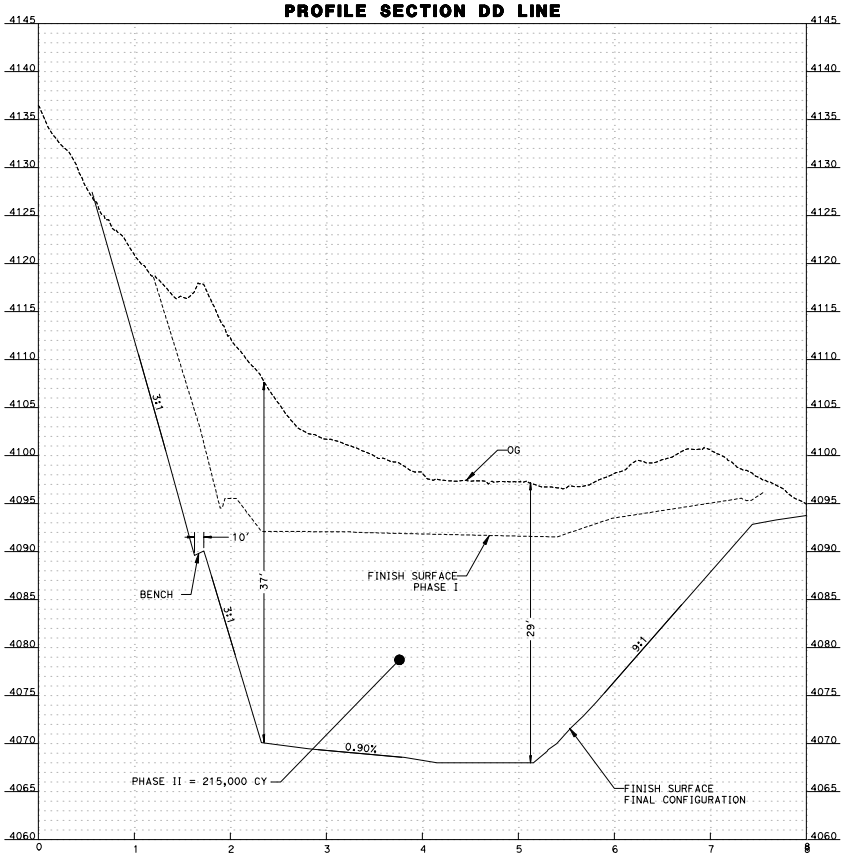
REGISTERED PROFESSIONAL ENGINEER
MATTHEW SCHOBER
No. 70489
Exp. 9-30-26
CIVIL
STATE OF CALIFORNIA

PROFILE SECTION DD LINE



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LEGAL DESCRIPTION:
TOWNSHIP 9 SOUTH, RANGE 34 EAST, SECTION 3

SCALE: Horiz 1" = 50'
Vert 1" = 5'

CONSTRUCTION DETAILS
C-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	
Caltrans PROJECT COORDINATION	FOREST BECKET	CHECKED BY	DATE REVISED	
		MATT SCHOBER		

LAST REVISION DATE PLOTTED => 27-May-2025
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BORDER LAST REVISED 7/2/2010 | USERNAME => s148041 DGN FILE => 937320aa_FinalPhase.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2462 | PROJECT NUMBER & PHASE 09170000721

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Bishop Field Office
351 Pacu Lane, Suite 100
Bishop, CA 93514
www.blm.gov/office/bishop-field-office

September 14, 2023

CACA106631887/CACA 058940
2800-P
CA170.10
Project No. 09-1700-0072
RW-Inyo 168 PM 21.6
Zurich Material Site 308

Letter of Consent

Elissa Konove, California Division Administrator
U.S. Department of Transportation
Federal Highway Administration

Attn: Philip Banea, Realty Specialist
650 Capital Mall, Suite 4-100
Sacramento, CA 95814

Dear Ms. Konove:

The Bureau of Land Management (BLM) Bishop Field Office received a request from the Department of Transportation, Federal Highway Administration (FHWA) for the appropriation of public lands of the United States within the State of California for the purpose of issuing a Highway Easement to the California Department of Highways (Caltrans), Inyo County, State of California.

The Federal Highway Administration, on behalf of Caltrans, has filed an application under the provisions of the Act of Congress of August 27, 1958, as amended (23 U.S.C. Section 317), for a material pit or quarry site (known as Zurich Pit 308) near State Highway 168.

The area requested generally lies in the:

Mount Diablo Meridian, California,
T. 9 S., R. 34 E.,
Section 3,
East half of the Southwest Quarter,
West Half of the Southeast Quarter

Containing 55.5 acre

The appropriation is shown on Exhibit A – Federal Application Map Land Survey Description by Raymond Worburton, LS8007, dated March 19, 2020.

In accordance with the provisions of the 1982 Interagency Agreement between the Bureau of Land Management (BLM) and the Federal Highway Administration (FHWA), the BLM agrees to the appropriation and transfer of the above described lands for the foregoing purpose subject to the following terms, conditions, and covenants which must be included in the right-of-way use document issued to the County of Inyo, State of California. The Federal Highway Administration is hereby given a right of entry for construction of the project. The BLM also agrees to the use of the areas outlined in Exhibit C as temporarily needed while the project is under construction.

The transfer and subsequent right-of-way are subject to the following terms, conditions, and covenants:

(1) If outstanding valid claims exist on the date of this grant, the Grantee shall obtain such permission as may be necessary on account of any such claim.

(2) Construction of the highway facility is to be undertaken by the Federal Highway Administration in compliance with the Act entitled "An Act for the Preservation of American Antiquities" approved June 8, 1906 (34 Stat. 225, 16 U.S.C. 432-433), and state laws where applicable.

(3) The easement herein granted shall terminate 10 years from the date of the execution of this deed by the United States of America in the event construction of the material or quarry site on the right-of-way is not started during such period.

(4) The easement herein granted is limited to use of the described right-of-way and the space above and below the established grade line of the highway pavement for the purposes of construction, operation, and maintenance of a material or quarry site in accordance with the approved plans and does not include the grant of any rights for non-highway purposes or facilities: provided, that the right of the Bureau of Land Management to use or authorize the use of any portion of the right-of-way for non-highway purposes shall not be exercised when such use would be inconsistent with the provisions of Title 23 of the United States Code and of the Federal Highway Administration Regulations issued pursuant thereto or would interfere with the free flow of traffic or impair the full use and safety of the highway, and in any case the Federal Highway Administration shall be consulted prior to the exercise of such rights: and provided, further that nothing herein shall preclude the Bureau of Land Management from locating Department of the Interior information signs on the portions of the right-of-way outside of construction clearing limits.

(5) The design and construction of the material or quarry site situated on this right-of-way will be in accord with the provisions of Title 23, United States Code-Highways, and amendments; and the terms and conditions specified by the Bureau of Land Management. Consistent with highway safety standards, the Grantee shall:

(a) Protect and preserve soil and vegetative cover and scenic and aesthetic values on the right-of-way outside construction limits.

(b) Provide for the prevention and control of soil erosion within the right-of-way and adjacent lands that might be affected by the construction operation, or maintenance of the material or quarry site, and shall vegetate and keep vegetated with suitable species, all earth cut or fill slopes feasible for revegetation or other areas on which ground cover is destroyed. The Grantee shall maintain all terracing, waterbars, lead-off ditches, or other preventive works that may be required to accomplish this objective. This provision shall also apply to slopes that are reshaped following slides which occur during or after construction.

(6) The Grantee may establish borrow, sand, or gravel pits, stone quarry, or permanent storage areas, within the right-of-way. other uses may take place if shown on approved construction plans and first obtaining approval.

(7) The Grantee shall maintain the right-of-way and highway facilities to acceptable standards of repair, orderliness, neatness, sanitation, and safety.

(8) When need for the easement herein granted shall no longer exist and the area has been rehabilitated to protect the public and environment, the Grantee shall give notice of that fact to the Secretary of Transportation and the rights herein agreed shall terminate and land shall immediately revert to the full control of the Secretary of the Department of the Interior or his assigns.

(9) In the event of a reversion, the Grantee shall reasonably restore the land subject to the easement to the condition which existed prior to the transfer and be responsible for its protection and maintenance until such time as the Grantee executes and records a quitclaim deed documenting the termination of the easement and the revesting of title in the United States.

(10) The Grantee shall reestablish or restore public land monuments, other land monuments identifying property corners or witness markers disturbed or destroyed by construction, reconstruction, or maintenance according to instructions of the Bureau of Land

Management, Department of the Interior or in accordance with standards established by applicable federal and state law.

(11) The provision of Title VI of the Civil Right Act of 1964 (78 Stat. 242) shall be complied with.

Sincerely,

Sherri Lisius
Bishop Field Manager

Exhibits (1 pp):

Exhibit A – Federal Application Map Land Survey Description dated March 19, 2020;

RECORDING REQUESTED BY
STATE OF CALIFORNIA

AND WHEN RECORDED MAIL TO:

California Department of Transportation
District 9 Right of Way Office
500 South Main Street
Bishop, California 93514

OFFICIAL STATE BUSINESS
Exempt from Recording Fees Pursuant to
Government Code 27383
Government Code 27388.1(a)(1)
Documentary Transfer Tax $0.00 Pursuant to
Revenue and Taxation Code 11922

Recorded in Official Records
County of Inyo County
Danielle M. Sexton
Clerk-Recorder

DOC # 20240000755

05/02/2024 Titles: 1 Pages: 7
10:10 AM jortega

Fees:	$0.00
Taxes:	$0.00
CA SB2 Fee:	$0.00
Total:	$0.00

Space above this line for Recorder's Use

HIGHWAY EASEMENT DEED
Federal Lands

District	County	Route	Postmile	Number
09	INY	168	21.6	4264

This Deed is made on April 11, 20 24, by and between the United States of America, acting by and through the Department of Transportation, Federal Highway Administration (GRANTOR), and the State of California, Department of Transportation (GRANTEE).

RECITALS

1. GRANTEE has filed an application under the provisions of the Act of Congress of August 27, 1958, as amended (23 U.S.C. Section 317 and/or Section 107(d)), for the right-of-way of a highway easement deed over certain federal land in the State of California under the jurisdiction of the United States Department of the Interior, Bureau of Land Management, hereinafter referred to as the BLM, which land has been appropriated by GRANTOR.

2. The Federal Highway Division Administrator, pursuant to delegation of authority from the Secretary of Transportation and Federal Highway Administrator, has determined that a right of way for quarry and materials site purposes, over the federal land covered by the application, is reasonably necessary for the operation and maintenance of highway facilities, including but not limited to Route 168, in Inyo County from post mile 18.31 to 54.69 and in Mono County from Postmile 0.0 to 1.45.

3. The United States Department of the Interior, Bureau of Land Management, acting by and through the GRANTOR, in its consent to the appropriation of the federal land, has agreed to the transfer by GRANTOR of an easement over the federal land to GRANTEE.

4. GRANTEE, with respect to activities related to the federal land, agrees that (a) no person shall, on the grounds of race, color, national origin, sex, age, disability, or religion be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to the GRANTEE's operations, programs, or activities conducted on the federal land; and (b) GRANTEE shall use the federal land so conveyed in compliance with all requirements imposed by or pursuant to Title VI of the Civil Rights Act of 1964 (42 U.S.C. Section 2000d to 2000d-4) and all applicable civil rights provisions of other Federal statutes.

Number
4264

NOW THEREFORE, GRANTOR does hereby grant to GRANTEE an easement for a right-of-way for a quarry and materials site, called "Zurich Material Site 308" to be utilized for the operation, and maintenance of a highway facility as part of the public highway, and use of the space above and below the established grade line of the site, on, over, across, in, and upon the following described unpatented federal land of the United States within the BLM Central California District as over seen by the Bishop Field Office, located in the County of Inyo, State of California, and described as:

DESCRIPTION

Township 9 South, Range 34 East, Mount Diablo Baseline Meridian

Section	Subdivision
3	a portion of SE 1/4, SW 1/4, NW 1/4

Containing 55.5 acres, more or less.

The land is more particularly described and shown on the single Federal Map Application sheet labeled Exhibit "A" and shown as that certain Parcel Number 4264-1, filed in the office of the Inyo County Recorder, in State Highway Map Book 6, page 3, on the 27th day of April, 2020.

This real property description has been prepared by me, or under my direction, in conformance with the Professional Land Surveyors' Act in the State of California.

Signature: _____
Professional Land Surveyor

Date: Oct 12, 2023

Number
4264

SUBJECT, however, to the terms, conditions, and covenants, attached hereto and made a part hereof:

(1) If outstanding valid claims exist on the date of this grant, the Grantee shall obtain such permission as may be necessary on account of any such claim.

(2) Construction of the highway facility is to be undertaken by the Federal Highway Administration in compliance with the Act entitled "An Act for the Preservation of American Antiquities" approved June 8, 1906 (34 Stat. 225, 16 U.S.C. 432-433), and state laws where applicable.

(3) The easement herein granted shall terminate 10 years from the date of the execution of this deed by the United States of America in the event construction of the material or quarry site on the right-of-way is not started during such period.

(4) The easement herein granted is limited to use of the described right-of-way and the space above and below the established grade line of the highway pavement for the purposes of construction, operation, and maintenance of a material or quarry site in accordance with the approved plans and does not include the grant of any rights for non-highway purposes or facilities: provided, that the right of the Bureau of Land Management to use or authorize the use of any portion of the right-of-way for non-highway purposes shall not be exercised when such use would be inconsistent with the provisions of Title 23 of the United States Code and of the Federal Highway Administration Regulations issued pursuant thereto or would interfere with the free flow of traffic or impair the full use and safety of the highway, and in any case the Federal Highway Administration shall be consulted prior to the exercise of such rights: and provided, further that nothing herein shall preclude the Bureau of Land Management from locating Department of the Interior information signs on the portions of the right-of-way outside of construction clearing limits.

(5) The design and construction of the material or quarry site situated on this right-of-way will be in accord with the provisions of Title 23, United States Code-Highways, and amendments; and the terms and conditions specified by the Bureau of Land Management. Consistent with highway safety standards, the Grantee shall:

   (a) Protect and preserve soil and vegetative cover and scenic and aesthetic values on the right-of-way outside construction limits.

   (b) Provide for the prevention and control of soil erosion within the right-of-way and adjacent lands that might be affected by the construction operation, or maintenance of the material or quarry site, and shall vegetate and keep vegetated with suitable species, all earth cut or fill slopes feasible for revegetation or other areas on which ground cover is destroyed. The Grantee shall maintain all terracing, waterbars, lead-off ditches, or other preventive works that may be required to accomplish this objective. This provision shall also apply to slopes that are reshaped following slides which occur during or after construction.

(6) The Grantee may establish borrow, sand, or gravel pits, stone quarry, or permanent storage areas, within the right-of-way. Other uses may take place if shown on approved construction plans and first obtaining approval.

(7) The Grantee shall maintain the right-of-way and highway facilities to acceptable standards of repair, orderliness, neatness, sanitation, and safety.

(8) When need for the easement herein granted shall no longer exist and the area has been rehabilitated to protect the public and environment, the Grantee shall give notice of that fact to the Secretary of Transportation and the rights herein agreed shall terminate and land shall immediately revert to the full control of the Secretary of the Department of the Interior or his assigns.

Number
4264

(9) In the event of a reversion, the Grantee shall reasonably restore the land subject to the easement to the condition which existed prior to the transfer and be responsible for its protection and maintenance until such time as the Grantee executes and records a quitclaim deed documenting the termination of the easement and the revesting of title in the United States.

(10) The Grantee shall reestablish or restore public land monuments, other land monuments identifying property comers or witness markers disturbed or destroyed by construction, reconstruction, or maintenance according to instructions of the Bureau of Land Management, Department of the Interior or in accordance with standards established by applicable federal and state law.

(11) The Provision of Title VI of Civil Right Act of 1964 (78 Stat. 242) shall be complied with.

I, Paul Brown, Attorney, State of California, Department of Transportation, am duly licensed to practice law in the State of California, and hereby certify that this deed is legally sufficient for its stated purpose.

Signature

02/22/2024
Date

IN WITNESS WHEREOF, I, Elissa Konove, Acting Division Administrator, pursuant to delegations of authority from the Secretary of Transportation and the Federal Highway Administrator, by virtue of authority in me vested by law, have hereunto subscribed my name as of the day and year first above written.

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

By Elissa Konove

Elissa Konove
California Acting Division Administrator

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of SACRAMENTO)

On April 11, 2024 before me, Norma E. Christensen, a notary officer
(insert name and title of the officer)

personally appeared Elissa Konove,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

NORMA E. CHRISTENSEN
Comm. #2413557
Notary Public · California
Sacramento County
Comm. Expires Aug 22, 2026

WITNESS my hand and official seal.

Signature Norma E. Christensen (Seal)

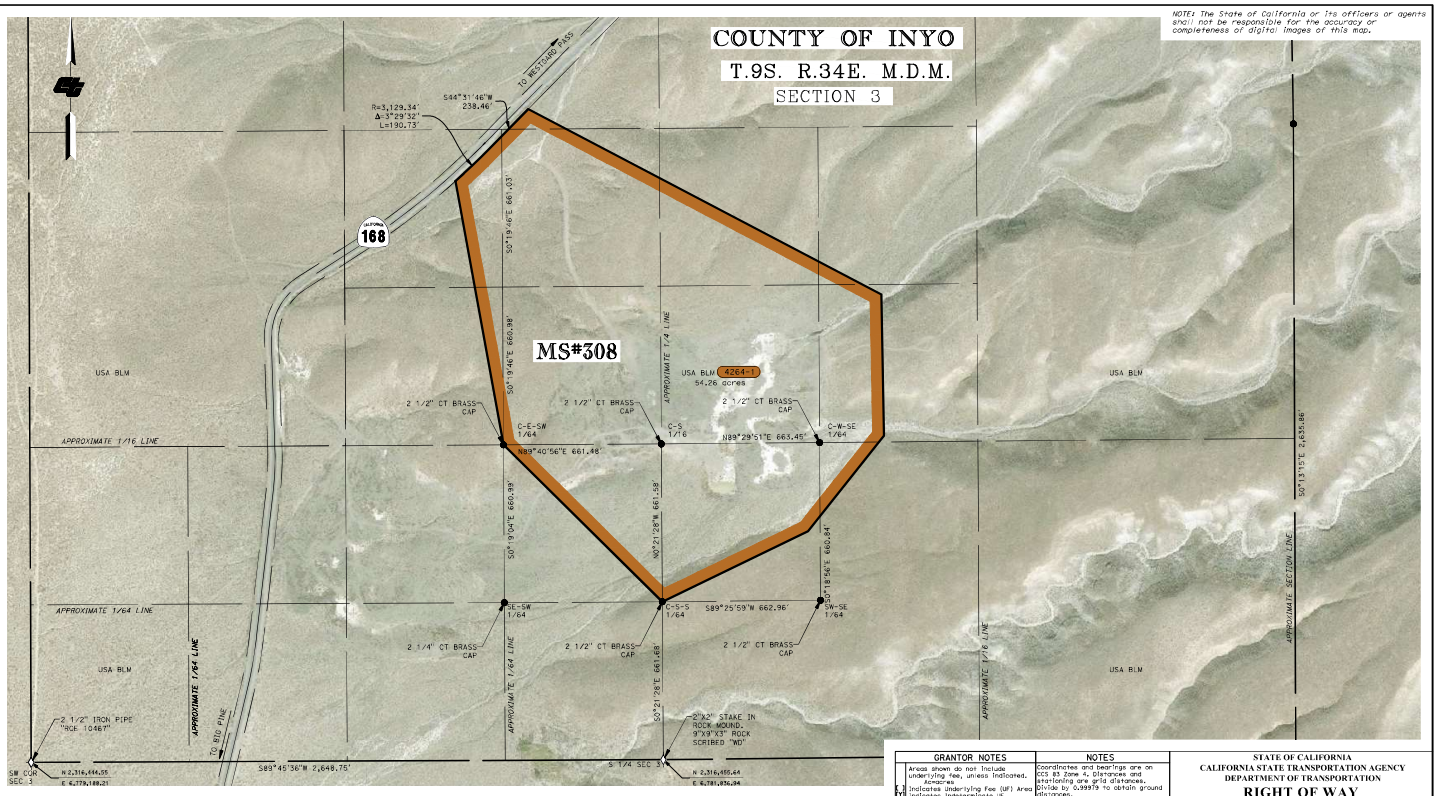
Number
4264

THIS IS TO CERTIFY, that the State of California, acting by and through the Department of Transportation (pursuant to Section 27281 of the Government Code), accepts for public purposes the real property described in this deed and consents to its recordation.

Dated: 4/17/2024

ANTHONY TAVARES
Director of Transportation

By _____
Name: BRANDON FITH
Attorney in Fact



PARCEL#	TITLE CODE ①	GRANTOR	AREAS (square feet or as noted) TOTAL	REQUIRED	[UF]	EXCESS	[UF]	REMAINDER	REMARKS	RECORDATION TYPE②	DATE	DOC.# ③
4264-1	E	USA BLM		54.26 AC					FOR HIGHWAY MATERIALS	HE		

GRANTOR NOTES

Areas shown do not include underlying fee, unless indicated.

Remarks
1 Indicates Underlying Fee (UF) Area
2 Indicates Indeterminate UF

TITLE CODES①
Avigcess Rights Only
F=Fee
E=Easement (Ease)
TC1=Temp Construction Ease
TO=Other Temp Ease (see Remarks)
O=Other (see Remarks)

TYPE②
WD=Grant deed
ED=Easement deed
Q=Quitclaim
DD=Director's deed
DE=Director's easement deed
DQ=Director's quitclaim deed
FOC=Final Order of Condemnation
HE=Highway easement deed
REL=Relinquishment
VAC=Vacation
JUA=Joint use agreement
CCUA=Consent to common use agreement

Document or Instrument number

NOTES

Coordinates and bearings are on CCS 83 Zone 4. Distances and stationing are grid distances. Divide by 0.99979 to obtain ground distances.
All distances are in feet unless otherwise noted.

LEGEND

Section Lines & Subsection Lines
(R) Indicates Radial Bearing
Indicates Concrete Monument
Indicates Section Corner
Indicates Found Monument as Noted
Title to State

STATE OF CALIFORNIA
CALIFORNIA STATE TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY

Parcel Map

Zurich Pit Material Site #308

FOR PREVIOUS R/W INFORMATION SEE MAP(S)

FULL SIZE MAP SCALE: 1" = 200'
FEET 0 100 200 400 600

TO DESIGN: EA(s):37320 FA#:
DRAFTED BY:RW CHECKED BY:SSC

DISTRICT	COUNTY	ROUTE	SHEET PM	SHEET NO.	TOTAL SHEETS
9	Inyo	168	21.5	1	1

PROJECT ID: 0917000072

PROJECT SURVEYOR: Roy Warmington LICENSE: 8007 SURVEYOR LICENSE DATE REVISIONS SURVEYOR LICENSE DATE REVISIONS SURVEYOR LICENSE

37320 Zurich Pit Parcel.dwg
P:\37320\Surveys\C3D_37320-RW-Drawings

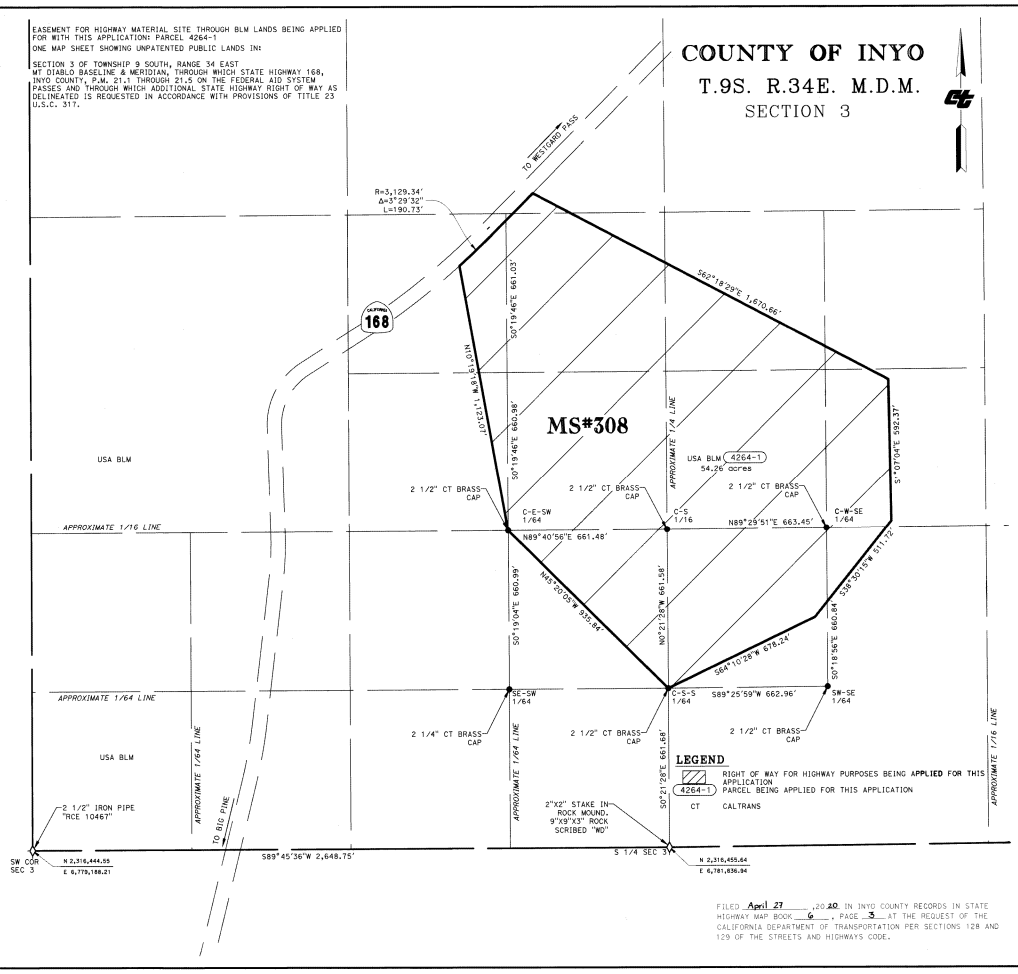
S.H.M.B 6 PG. 3

EASEMENT FOR HIGHWAY MATERIAL SITE THROUGH BLM LANDS BEING APPLIED FOR WITH THIS APPLICATION: PARCEL 4264-1

ONE MAP SHEET SHOWING UNPATENTED PUBLIC LANDS IN:

SECTION 3 OF TOWNSHIP 9 SOUTH, RANGE 34 EAST
MT DIABLO BASELINE & MERIDIAN, THROUGH WHICH STATE HIGHWAY 168, INYO COUNTY, P.M. 21.1 THROUGH 21.5 ON THE FEDERAL AID SYSTEM PASSES AND THROUGH WHICH ADDITIONAL STATE HIGHWAY RIGHT OF WAY AS DELINEATED IS REQUESTED IN ACCORDANCE WITH PROVISIONS OF TITLE 23 U.S.C. 317.

COUNTY OF INYO
T.9S. R.34E. M.D.M.
SECTION 3



LEGEND

- RIGHT OF WAY FOR HIGHWAY PURPOSES BEING APPLIED FOR THIS APPLICATION
- 4264-1 PARCEL BEING APPLIED FOR THIS APPLICATION
- CT CALTRANS

FILED April 27 ,20 20 IN INYO COUNTY RECORDS IN STATE HIGHWAY MAP BOOK 6 , PAGE 3 AT THE REQUEST OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION PER SECTIONS 128 AND 129 OF THE STREETS AND HIGHWAYS CODE.

NOTE: The State of California or its officers or agents shall not be responsible for the accuracy or completeness of digital images of this map.

SURVEYOR'S STATEMENT

RAYMOND WARBURTON STATES THAT HE IS BY OCCUPATION A LAND SURVEYOR EMPLOYED BY THE CALIFORNIA DEPARTMENT OF TRANSPORTATION AND THAT THE SURVEY OF THE STATE HIGHWAY RIGHT OF WAY SHOWN ON THIS MAP WAS MADE BY EMPLOYEES OF SAID DEPARTMENT UNDER AUTHORITY AND THAT SUCH SURVEY IS ACCURATELY REPRESENTED ON THIS MAP.

Raymond Warburton
PROFESSIONAL LAND SURVEYOR

03/19/20
DATE

PROFESSIONAL LAND SURVEYOR — Raymond Warburton — No. LS 9007 — Exp. 12/31/2020 — STATE OF CALIFORNIA

APPLICANT'S CERTIFICATE

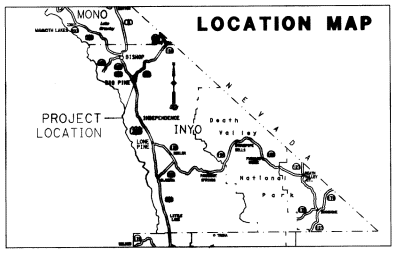
THIS IS TO CERTIFY THAT RAYMOND WARBURTON WHO SUBSCRIBED THE STATEMENT HEREON IS THE PERSON EMPLOYED BY THE UNDERSIGNED APPLICANT TO PREPARE THIS MAP WHICH HAS BEEN ADOPTED BY THE APPLICANT AS THE FINAL LOCATION OF THE RIGHT OF WAY THEREBY SHOWN AND THAT THIS MAP IS FILED AS PART OF THE COMPLETE APPLICATION, AND IN ORDER THAT THE APPLICANT MAY OBTAIN THE BENEFITS OF SECTION 317 OF THE FEDERAL HIGHWAY ACT APPROVED AUGUST 27, 1958 (72 STA.916) AND I FURTHER CERTIFY THAT THE RIGHT OF WAY HEREON DESCRIBED IS DESIRED FOR STATE HIGHWAY PURPOSES.

DISTRICT DIRECTOR
DEPARTMENT OF TRANSPORTATION

03-19-20
DATE

EXHIBIT "A"

LOCATION MAP



NOTES

Coordinates and bearings are on CCS 83 Zone 4. Distances and stationing are 0.99979 to obtain ground distances.
All distances are in feet unless otherwise noted.

LEGEND

- Section Lines & Subsection Lines
- (R) Indicates Radial Bearing
- Indicates Concrete Monument
- Indicates Section Corner
- Indicates Found Monument as Noted
- Title to State

STATE OF CALIFORNIA
CALIFORNIA STATE TRANSPORTATION AGENCY
DEPARTMENT OF TRANSPORTATION

FEDERAL APPLICATION MAP
BUREAU OF LAND MANAGEMENT
Zurich Pit Material Site

FOR PREVIOUS R/W INFORMATION SEE MAP(S)

FULL SIZE MAP SCALE: 1" = 200'
SCALE: FEET 0 100 200 400 600

TO DESIGN: EA(o):37320 FAM:
DRAFTED BY:RM & AG CHECKED BY:SCC

DISTRICT	COUNTY	ROUTE	SHEET PM	SHEET NO.	TOTAL SHEETS
9	Inyo	168	21.5	1	1

PROJECT ID: 0917000072

PROJECT SURVEYOR: RW LICENSE: LS 9007

DATE	REVISIONS	SURVEYOR	LICENSE	DATE	REVISIONS	SURVEYOR	LICENSE

CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM (rev. 06/2022)

Project Information

Project Name (if applicable): Zurich Pit

DIST-CO-RTE: 09-INY-168 **PM/PM:** 21.60/21.60

EA: 09-37320 **Federal-Aid Project Number:** 0917000072

Project Description

Caltrans plans to acquire a highway map application (easement) from the Bureau of Land Management (BLM) for the establishment of a sand and gravel mining site. The site is located approximately three miles east northeast of the community of Big Pine and approximately 1,300 feet south of State Route 168. The material site will be 55 acres, of which 14 acres will be mined. All mining activities will occur within the operational right-of-way of the mining site once acquired. No external utilities or facilities are required for mining site operation. The materials exported from the site will only be used for Caltrans construction projects and maintenance activities on the State Highway System. The material site will be operated in coordination with Inyo County and the California Division of Mine Reclamation. See page three for a listing of environmental commitments.

Caltrans CEQA Determination (Check one)

☒ **Not Applicable –** Caltrans is not the CEQA Lead Agency

☐ **Not Applicable –** Caltrans has prepared an IS or EIR under CEQA

Based on an examination of this proposal and supporting information, the project is:

☐ **Exempt by Statute.** (PRC 21080[b]; 14 CCR 15260 et seq.)

☐ **Categorically Exempt. Class** Enter class. (PRC 21084; 14 CCR 15300 et seq.)

- ☐ No exceptions apply that would bar the use of a categorical exemption (PRC 21084 and 14 CCR 15300.2). See the SER Chapter 34 for exceptions.

☐ **Covered by the Common Sense Exemption.** This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (14 CCR 15061[b][3].)

Senior Environmental Planner or Environmental Branch Chief

Print Name	Signature	Date

Project Manager

Print Name	Signature	Date

CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Caltrans NEPA Determination (Check one)

☐ **Not Applicable**

Caltrans has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). See SER Chapter 30 for unusual circumstances. As such, the project is categorically excluded from the requirements to prepare an EA or EIS under NEPA and is included under the following:

☒ **23 USC 326:** Caltrans has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to 23 USC 326 and the Memorandum of Understanding dated April 18, 2022, executed between FHWA and Caltrans. Caltrans has determined that the project is a Categorical Exclusion under:

- ☒ **23 CFR 771.117(c): activity (c)(5)**
- ☐ **23 CFR 771.117(d): activity (d)(Enter activity number)**
- ☐ **Activity Enter activity number listed in Appendix A of the MOU between FHWA and Caltrans**

☐ **23 USC 327:** Based on an examination of this proposal and supporting information, Caltrans has determined that the project is a Categorical Exclusion under 23 USC 327. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

Senior Environmental Planner or Environmental Branch Chief

Kirsten Helton	Kirsten Helton	01/26/2023
Print Name	Signature	Date

Project Manager/ DLA Engineer

Forest Becket	Forest Becket	01/26/2023
Print Name	Signature	Date

Date of Categorical Exclusion Checklist completion (if applicable): 1/26/2023
Date of Environmental Commitment Record or equivalent: 1/24/2022

Briefly list environmental commitments on continuation sheet if needed (i.e., not necessary if included on an attached ECR). Reference additional information, as appropriate (e.g., additional studies and design conditions).

CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION DETERMINATION FORM

Continuation sheet:

Environmental Commitments

Biological Resources

1) Notify a Caltrans biologist at least 2 months prior to the start of any new mining operations; this includes both the start of mining operations at the site and any additional operational phases that are initiated on undisturbed ground.
2) Pre-construction nesting bird surveys will be conducted by a Caltrans biologist between February 15th and September 30th within the 72 hours prior to the start of new mining operations. The survey will be 250 feet from the project impact area (PIA) for songbirds, including ground-nesting birds, and 500 feet from the PIA for nesting raptors.
    a. If nesting birds are found within 250 feet (songbirds) or 500 feet (raptors) of the PIA, a no work buffer will be implemented until a staff Biologist determines that there are no longer active nests within the buffered area.
3) Focused reptile surveys for the common/northern sagebrush lizard will be conducted prior to the start of new mining operations by a Caltrans biologist within the species' active period (spring to fall).
    a. Any individuals observed within the biological study area (BSA) will be noted, and further avoidance and minimization measures will be determined through consultation with BLM.
4) Rare plant surveys will be conducted prior to the start of new mining operations by a staff Biologist within the active blooming periods for sensitive-status plants that have potential to occur within the PIA.
    a. Any individuals observed within the PIA will be translocated, under the guidance of BLM.

Inter-Agency Agreements

Caltrans, in coordination with Inyo County and the California Division of Mine Reclamation, will adhere to the following inter-agency approved documents:

- Material Site #308, Operations Plan / Project Description
- Material Site #308, Reclamation Plan

09-37320_NEPA CE

Final Audit Report 2023-01-26

Created:	2023-01-26
By:	Ryan Spaulding (s144987@dot.ca.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAyttKc6cXiGoAO1C1Mato-KvX1c8YXUlE

"09-37320_NEPA CE" History

Document created by Ryan Spaulding (s144987@dot.ca.gov)
2023-01-26 - 6:01:19 PM GMT

Document emailed to Kirsten Helton (kirsten.helton@dot.ca.gov) for signature
2023-01-26 - 6:04:44 PM GMT

Document emailed to Forest Becket (forest.becket@dot.ca.gov) for signature
2023-01-26 - 6:04:45 PM GMT

Email viewed by Forest Becket (forest.becket@dot.ca.gov)
2023-01-26 - 6:43:15 PM GMT

Document e-signed by Forest Becket (forest.becket@dot.ca.gov)
Signature Date: 2023-01-26 - 6:43:35 PM GMT - Time Source: server

Email viewed by Kirsten Helton (kirsten.helton@dot.ca.gov)
2023-01-26 - 8:17:45 PM GMT

Document e-signed by Kirsten Helton (kirsten.helton@dot.ca.gov)
Signature Date: 2023-01-26 - 8:35:42 PM GMT - Time Source: server

Agreement completed.
2023-01-26 - 8:35:42 PM GMT

Memorandum

Making Conservation a California Way of Life.

To: **FOREST BECKET**
Senior Environmental Planner
District 9 Environmental Unit

Date: January 21, 2022

File: **09-37320**
0917000072
Zurich Material Site

From: **DEPARTMENT OF TRANSPORTATION- District 9**
Dannique Aalbu
Associate Environmental Planner/Biologist
District 9 Environmental Unit

Subject: **BIOLOGICAL RESOURCES EVALUATION MEMO**

Project Description:

The California Department of Transportation (Caltrans) is proposing to establish Zurich Material Site (MS 308) [a former material site] for mining of shale near Big Pine, California. A new highway easement deed will be needed from the Bureau of Land Management (BLM) for approximately 55 acres. Of those 55 acres, disturbance caused by mining operations will be limited to approximately 14 acres. Approximately 336,000 cubic yards of material will be extracted from the site over a minimum 50-year lifespan.

The material site will be mined in two separate phases. For the first phase, the existing surface of the pit will be excavated to a depth of up to 10 feet. The first phase will also involve the reestablishment of a previously rehabilitated access road, construction of check dams (n=4) and diversion channels (n=2), and the installation of an access gate and earthen berm road block. The second phase of mining will see the pit surface further excavated to a maximum depth of up to 38 feet. The pit will be graded to ensure internal drainage. Topsoil (approximately 4 to 6 inches in depth) will be relocated to soil berms on the outer perimeter of the pit for post mining reclamation purposes.

Upon completion of the extraction of all material to the final grade lines, the final slopes will be reclaimed in accordance with SMARA regulations. Topsoil berms will be removed and spread evenly on all slopes. It is Caltrans' intent to rescind this site back to the Bureau of Land Management after mining resources are exhausted and slopes are reclaimed. Upon final site configuration and revegetation, a final SMARA reclamation inspection will be performed to retire the associated mine ID and commence with the intended end-use (natural resources- open space designation). At this point, no further mining activities will occur at the site.

The material site's purpose is to provide quality material for District 9 maintenance forces for use in highway maintenance work in northern Inyo County and southern Mono County. The scale at the material site is the ideal material for shoulder backing and other material intensive maintenance activities. The development of the site coincides with District 9's strategic plan for establishing material sources within reasonable haul proximity.

All 55.5 acres will be subject to the environmental clearance detailed in this document.

Project Setting:
The material site is located in Inyo County near State Route 168 at approximately Post Mile (PM) 21.60. The surrounding area is a mix of Bureau of Land Management (BLM) and the Los Angeles Department of Water and Power (LADWP) property. The town of Big Pine is located approximately 3 miles to the southwest.

All activities will be confined to the 55-acre property, and mining activities will be confined to approximately 14 acres. The Project Impact Area (PIA) for the material site will include: (1) where mining activities will occur, (2) where the access road will be reestablished, and (3) where the earthen berm road block will be constructed. The Biological Study Area (BSA) for the Project extends outside the PIA, covering the entire 55-acre property.

Most of the PIA is located within the footprint of the former material site. The area includes obvious signs of disturbance in the form of compacted soils, lack of vegetation, and noteworthy amounts of trash.

The BSA is comprised of the adjacent desert shrubland and alluvial fan topography. The vegetation community surrounding the material site is dominated by shadscale scrub. Prominent plant species located within the BSA include: four-wing saltbush, Mojave indigo bush, budsage, winterfat, greasewood, Mojave woolyaster, and desert trumpet. Four-wing saltbush is dominant. The elevation within the BSA ranges from 4000 to 4200 feet.

Quad(s): Uhlmeyer Spring; Big Pine; Waucoba Mountain; Tinemaha Reservoir; Poleta Canyon; Westgard Pass; Deep Springs Lake; Cowhorn Valley; Fish Springs

Methods Used (Species Lists included in Appendices A-C):
_x_ California Natural Diversity Data Base (CNDDB) _x_ California Native Plant Society (CNPS)

_x_ U.S. Fish and Wildlife Service Species List (USFWS)

_x_ Date Survey Completed: **4/23/2020 (field survey); 6/1/2020 (desktop review)**

Other: Field surveys required prior to construction start

Resources Evaluated: See attached USFWS, CNDDB, and CNPS Species Lists

(Appendices A-C)

Scientific Name	Common Name	Listing	Habitat Present in PIA	Occurrence within 5 mi. of BSA	Potential to occur within BSA
Fauna					
Accipiter cooperii	Cooper's hawk	CDFW_WL	No	No	No; habitat absent within the BSA.
Accipiter gentilis	Northern goshawk	BLM_S	No	No	No; habitat absent within the BSA.
Anaxyrus exsul	Black toad	CDFW_FP; BLM_S	No	No	No; habitat absent within the BSA.
Antrozous pallidus	Pallid bat	BLM_S	No	No	No; habitat absent within the BSA.
Aquila chrysaetos	Golden eagle	BLM_S	No	No	No; habitat absent within the BSA.
Asio otus	Long-eared owl	CDFW_SSC	No	No	No; habitat absent within the BSA.
Athene cunicularia	Burrowing owl	CDFW_SSC; BLM_S	No	Yes	No; only nearby record is historic (1891). Current habitat is unlikely to support a nesting colony as ground squirrel sign, the species' most notable prey, was absent during field surveys,
Batrachoseps campi	Inyo mountains slender salamander	BLM_S	No	No	No; habitat absent within the BSA.
Brachylagus idahoensis	Pygmy rabbit	BLM_S	No	No	No; habitat absent within the BSA.
Buteo swainsoni	Swainson's hawk	CDFW_ Threatened; BLM_S	No	Yes	No; habitat absent within the BSA. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. All known occurrences within the BSA are historic.
Catostomus fumeiventris	Owens sucker	CDFW_SSC	No	No	No; habitat absent within the BSA.
Centrocercus urophasianus	Greater sage grouse	BLM_S	No	No	No; habitat absent within the BSA.
Charadrius alexandrinus nivosus	western snowy plover	CDFW_SSC	No	No	No; habitat absent within the BSA.
Charadrius montanus	mountain plover	CDFW_SSC; BLM_S	No	No	No; habitat absent within the BSA.
Circus hudsonius	Northern harrier	CDFW_SSC	No	No	No; habitat absent within the BSA.
Coccyzus americanus occidentalis	Western yellow-billed cuckoo	USFWS_ Threatened; CDFW_ Endangered; BLM_S	No	No	No; habitat absent within the BSA.
Corynorhinus townsendii	Townsend's big-eared bat	Caltrans_FP; BLM_S; CDFW_SSC	No	Yes	No; habitat absent within the BSA. Human disturbance and lack of mesic features render the BSA unsuitable for this species.

Cyprinodon nevadensis amargosae	Amargosa River Pupfish	BLM_S	No	No	No; habitat absent within the BSA.
Cyprinodon radiosus	Owens Pupfish	USFWS_ Endangered; CDFW_ Endangered	No	No	No; habitat absent within the BSA.
Danaus plexippus	Monarch butterfly	USFWS_ candidate	No	No	No; habitat absent within the BSA.
Elgaria panamintina	Panamint alligator lizard	CDFW_SSC; BLM_S	No	Yes	No; habitat absent within the BSA. Habitat consists of areas near permanent water in canyons, damp gullies, and rocky areas near dense vegetation. Closest known occurrence is in the vicinity of Batchelder Spring.
Empidonax traillii extimus	Southwestern willow flycatcher	USFWS_ Endangered; CDFW_ Endangered	No	No	No; habitat absent within the BSA.
Euderma maculatum	spotted bat	Caltrans- FP; BLM_S; CDFW_SSC	No	No	No; habitat absent within the BSA.
Haliaeetus leucocephalus	Bald eagle	CDFW_ Endangered; BLM_S	No	No	No; habitat absent within the BSA.
Icteria virens	yellow-breasted chat	CDFW_SSC	No	No	No; habitat absent within the BSA.
Lasiurus cinereus	Hoary bat	Caltrans_FP	No	No	No; habitat absent within the BSA.
Lepus townsendii townsendii	Western white-tailed jackrabbit	CDFW_SSC	No	No	No; habitat absent within the BSA.
Lithobates pipiens	Northern leopard frog	CDFW_SSC	No	No	No; habitat absent within the BSA.
Martes pennanti (pacifica) DPS	Pacific fisher	BLM_S	No	No	No; habitat absent within the BSA.
Microtus californicus vallicola	Owens Valley vole	CDFW_SSC; BLM_S	No	No	No; habitat absent within the BSA.
Myotis ciliolabrum	Western small-footed myotis	Caltrans_FP; BLM_S	No	Yes	No; habitat absent within the BSA. Requires nearby water source. Closest known occurrence is 5 miles north at Warm Springs.
Myotis evotis	Long-eared myotis	Caltrans_FP; BLM_S	No	No	No; habitat absent within the BSA.
Myotis thysanodes	Fringed myotis	Caltrans_FP; BLM_S	No	No	No; habitat absent within the BSA.
Myotis yumanensis	Yuma myotis	Caltrans_FP; BLM_S	No	No	No; habitat absent within the BSA.
Ovis canadensis nelson	Desert bighorn sheep	CDFW_FP; BLM_S	No	No	No; habitat absent within the BSA.
Ovis canadensis sierrae	Sierra Nevada bighorn sheep	CDFW_	No	No	No; habitat absent within the BSA.

		Endangered; BLM_S			
Piranga rubra	Summer tanager	CDFW_SSC	No	No	No; habitat absent within the BSA.
Rhinichthys osculus ssp. 2	Owens speckled dace	CDFW_SSC; BLM_S	No	No	No; habitat absent within the BSA.
Riparia riparia	Bank swallow	CDFW_ Threatened; BLM_S	No	Yes	No; habitat absent within the BSA. Habitat included areas near permanent water. Only known occurrence is historic (1891).
Sceloporus graciosus graciosus	**Northern/ common sagebrush lizard**	**BLM_S**	**No**	**n/a**	**Yes; species lives in sagebrush and other types of shrublands, mainly in the mountains (at higher elevations than the Western Fence Lizard). Prefers open areas with scattered low bushes and lots of sun.**
Siphateles bicolor snyderi	Owens tui chub	USFWS_ Endangered; CDFW_ Endangered; BLM_S	No	No	No; habitat absent within the BSA.
Vireo bellii pusillus	Least Bell's vireo	BLM_S; USFWS_ Endangered	No	No	No; habitat absent within the BSA.
Xerospermophilus mohavensis	Mohave ground squirrel	BLM_S; CDFW_ Threatened	No	No	No; the site is out of range for this species.
Flora					
Aliciella triodon	**Coyote gilia**	**2B.2**	**No**	**Yes**	**Yes; habitat is present within the BSA. Elevation range: 3900-5600 ft. Blooming period: April – June. Quads: occurrences in Uhlmeyer Spring and Big Pine. Associated species include Sarcobatus vermiculatus and Atriplex confertifolia**
Allium atrorubens var. atrorubens	Great Basin onion	2B.3	No	No	No; general habitat is present, but microhabitat is not. Elevation range: 4050-7620 ft. Blooming period: May – June. Quad: Big Pine. Site only slightly overlaps with species elevation range. Is found in sandy or rocky soil. Closest recorded occurrence is off Glacier Lodge Road, where it is locally common.
Astragalus argophyllus var. argophyllus	Silver leaf milk-vetch	2B.2	No	No	No; habitat absent within the BSA.
Astragalus geyeri var. geyeri	Geyer's milk-vetch	2B.2	No	No	No; general habitat is present, but microhabitat (sandy flats and valley floor) is not. Elevation range: 3790-6520 ft. Blooming period: May-August. Quad: Deep Springs Lake.

Astragalus johannis-howellii	Long Valley milk-vetch	1B.2	No	No	No; habitat absent within the BSA.
Astragalus lentiginosus var. piscinensis	Fish Slough milk-vetch	1B.1	No	No	No; habitat absent within the BSA.
Astragalus monoensis	Mono milk-vetch	1B.2	No	No	No; habitat absent within the BSA.
Astragalus oophorus var. lavinii	Lavin's milk-vetch	1B.2	No	No	No; habitat absent within the BSA.
Astragalus pseudiodanthus	Tonopah milk-vetch	1B.2	No	No	No; habitat absent within the BSA.
Astragalus serenoi var. shockleyi	**Shockley's milk-vetch**	**2B.2**	**No**	**Yes**	**Yes; habitat is present within the BSA. Elevation range: 3880- 7110 ft. Blooming period: April – July. Quad: Uhlmeyer Spring and many others. Closest recorded occurrence is north of Death Valley Road, 4 miles east of Big Pine.**
Atriplex gardneri var. falcata	Falcate saltbrush	2B.2	No	No	No; habitat present within the BSA, but usually occurs in Chenopod scrub. Elevation range: 4080 – 4520 ft. Blooming period: May – August. Quad: Poleta Canyon. Only recorded occurrence is historic (1974).
Blephari-dachne kingii	**King's eyelash grass**	**2B.3**	**No**	**Yes**	**Yes; habitat (desert scrub on alluvial gravels) is present within the BSA. Elevation range: 1590- 7000 ft. Blooming period: May. Quad: Uhlmeyer Spring, Big Pine, Deep Springs Lake. Closest recorded occurrence is along Waucoba road near junction with HWY 168.**
Boechera bodiensis	Bodie Hills rockcress	1B.3	No	No	No; out of elevation range: 6595-11,600 ft.
Boechera dispar	Pinyon rockcress	2B.3	No	Yes	No; general habitat is present, but microhabitat is not. Elevation range: 3300-9210 ft. Blooming Period: June – August. Quad: Uhlmeyer Spring and many others. Closest recorded occurrence is along ridge at head of Soldier Canyon. Associated with Astragalus inyoensis and Allium atrorubens var. cristatum.
Boechera lincolnensis	Lincoln rockcress	2B.3	No	No	No; habitat (Limestone substrate) absent within the BSA.
Boechera pendulina	Rabbit-ear rockcress	2B.1	No	No	No; out of elevation range: 9990 – 10850 ft.
Boechera shockleyi	Shockley's rockcress	2B.2	No	No	No; habitat (pinyon and juniper woodland) is absent within the BSA.
Calochortus excavates	Inyo County star-tulip	1B.1	No	No	No; habitat (Chenopod scrub, meadows and seeps) is absent within the BSA.
Chaetadelpha wheeleri	**Wheeler's dune-broom**	**2B.2**	**No**	**No**	**Yes; habitat is present within the BSA. Elevation range: 2540 – 4810 ft.**

					Blooming period: April – September. Quad: Deeps Springs Lake, Westgard Pass. Closest recorded occurrence is along HWY 168, 18 miles east of junction with US 395, in the "foothills of the White mountains".
Chrysothamnus greenei	Greene's rabbitbrush	2B.3	No	No	No; species is out of elevation range: 5132 – 5427 ft.
Crepis runcinata	Fiddleleaf hawksbeard	2B.2	No	No	No; habitat (moist, alkaline valley bottoms) is absent within the BSA.
Cryptantha fendleri	Sand dune cryptantha	2B.2	No	No	No; species is out of elevation range: 6390 -7250 ft.
Cryptantha roosiorum	Bristlecone cryptantha	Rare; BLM_S	No	No	No; habitat absent within the BSA.
Cuniculotinus gramineus	Panamint rock-goldenrod	2B.3	No	No	No; species is out of elevation range: 6300 – 9055 ft.
Cusickiella quadricostata	Bodie hills cusikiella	1B.2	No	No	No; habitat absent within the BSA.
Dedeckera eurekensis	July gold	1B.3	No	No	No; habitat (rocky ridges, cliffs, talus slopes and washes in carbonate soils) are absent within the BSA.
Diplacus parryi	Parry's monkeyflower	2B.3	No	No	No; species is out of elevation range: 4980 – 8500 ft.
Elymus scribneri	Scribner's wheat grass	2B.3	No	No	No; species is out of elevation range: 8390 – 13,600 ft.
Eremothera boothii ssp. boothii	Booth's evening primrose	2B.3	No	No	No; habitat (Joshua tree woodland, Pinyon and juniper woodland) is absent within the BSA.
Eremothera boothii ssp. intermedia	Booth's hairy evening primrose	2B.3	No	No	No; general habitat is present, but microhabitat is not. Elevation range: 2880 – 8810 ft. Blooming period: May – June. Quad: Tinemaha Reservoir; Fish Springs, Westgard Pass. Closest recorded occurrence along SR 168 approx. 2.5 miles northeast of Bachelor Spring.
Ericameria gilmanii	Gilman's goldenbush	1B.3	No	No	No; habitat (Montane and Subalpine coniferous forest) is absent within the BSA.
Erigeron calvus	Bald daisy	1B.1	No	No	No; habitat absent within the BSA.
Erigeron compactus	Compact daisy	2B.3	No	No	No; habitat (Pinyon and Juniper woodland) is absent within the BSA.
Eriogonum alexanderae	Alexander's buckwheat	1B.1	No	No	No; habitat absent within the BSA.
Eriogonum eremicola	Wild Rose canyon buckwheat	1B.3	No	No	No; habitat absent within the BSA.
Eriogonum microthecum var. panamintense	Panamint mountains buckwheat	N/A	No	No	No; habitat absent within the BSA.
Erythranthe calcicola	Limestone monkeyflower	1B.3	No	No	No; habitat (woodlands on talus slopes on carbonate substrate) is absent within the BSA.

Fimbristylis thermalis	Hot springs fimbristylis	2B.2	No	No	No; habitat (meadows and seeps) is absent within the BSA.
Grusonia pulchella	Beautiful cholla	2B.2	No	No	No; species is out of elevation range: 4920 – 7570 ft.
Hesperidanthus jaegeri	Jaeger's hesperidanthus	1B.2	No	No	No; species is out of elevation range: 7000 – 9190 ft.
Hymenopappus filifolius var. nanus	Little cutleaf	2B.3	No	No	No; habitat (Pinyon and Juniper woodland, subalpine coniferous forest) is absent within the BSA.
Ivesia kingii var. kingii	Alkali ivesia	2B.2	No	No	No; habitat absent within the BSA.
Jaffueliobryum wrightii	Wright's jaffueliobryum moss	2B.3	No	No	No; habitat (carbonate areas with dry openings, rock crevices) is absent within the BSA.
Juncus nodosus	Knotted rush	2B.3	No	No	No; habitat (meadows and seeps, marches and swamps) is absent within the BSA.
Loefingia squarrosa var. artemisiarum	Sagebrush loeflingia	2B.2	No	No	No; habitat (sandy flats and dunes) is absent within the BSA.
Lomatium foeniculaceum ssp. Macdougalii	**MacDougal's lomatium**	**2B.2**	**No**	**Yes**	**Yes; habitat is present within the BSA. Elevation range: 3980 – 7240 ft. Blooming period: April – July. Quad: Uhlmeyer Spring, Westgard Pass. Only recorded occurrence is historic (1965) near submit of Westgard Pass.**
Lupinus duranii	Mono Lake lupine	2B.2	No	No	No; habitat absent within the BSA.
Lupinus magnificus var. hesperius	McGee meadows lupine	1B.3	No	No	No; habitat absent within the BSA.
Lupinus magnificus	Panamint mountains lupine	n/a	No	No	No; habitat absent within the BSA.
Lupinus padre-crowleyi	Father Crowley's lupine	1B.2	No	No	No; species is out of elevation range: 7210 – 13130 ft. Blooming period: July – August. Occurs in riparian habitat.
Lupinus pusillus var. intermontanus	**Intermontane lupine**	**2B.3**	**No**	**Yes**	**Yes; habitat is present within the BSA. Elevation range: 3880 – 6760 ft. Blooming period: May – June. Quad: Uhlmeyer Spring, Big Pine. Only recorded occurrence is historic (1974), 1 mile east of Owens river at Stewart Lane.**
Mentzelia inyoensis	Inyo blazing star	1B.3	No	No	No; habitat absent within the BSA.
Nemacladus inyoensis	Badger Flat threadplant	1B.2	No	No	No; habitat is absent within the BSA. Species is out of elevation range.
Oenothera longissima	Long-stem evening primrose	2B.2	No	No	No; habitat (seasonally mesic areas) is absent within the BSA.
Oryctes nevadensis	**Nevada oryctes**	**2B.1**	**Yes**	**Yes**	**Yes; habitat is present within the BSA. Elevation range: 3190 – 8320 ft. Blooming period: April – June. Quad: Big Pine. Closest recorded**

					occurrence along SR 168 at Zurich. Associated with Atriplex confertifolia, Ephedra nevadensis, etc. in sandy soils.
Perityle inyoensis	Inyo rock daisy	1B.2	No	No	No; habitat absent within the BSA.
Phacelia inyoensis	Inyo phacelia	1B.2	No	No	No; habitat (meadows and seeps) is absent within the BSA.
Phacelia mustelina	Death Valley round-leaved phacelia	1B.3	No	No	No; habitat absent within the BSA.
Physocarpus alternans	Nevada ninebark	2B.3	No	No	No; habitat (pinyon and juniper woodland) is absent within the BSA.
Plagiobothrys nitens	Shiny-nutlet popcornflower	2B.1	No	No	No; habitat (meadows and seeps) is absent within the BSA.
Plagiobothrys parishii	Parish's popcornflower	1B.1	No	No	No; habitat (mesic areas) is absent within the BSA.
Plagiobothrys salsus	Desert popcornflower	2B.2	No	No	No; habitat (moist, alkaline mud flats) is absent within the BSA.
Polyctenium williamsiae	Williams combleaf	1B.2	No	No	No; habitat absent within the BSA.
Sidalcea covillei	Owens Valley checkerbloom	1B.1	No	No	No; habitat (meadows and seeps, chenopod scrub) is absent within the BSA.
Sphenopholis obtusata	Prairie wedge grass	2B.2	No	No	No; habitat (cismontane woodland, meadows and seeps) is absent within the BSA.
Streptanthus oliganthus	Masonic Mountain jewelflower	1B.2	No	No	No; habitat (pinyon and juniper woodland) is absent within the BSA.
Suaeda occidentalis	Western seablite	2B.3	No	No	No; general habitat is present, but microhabitat is not. Elevation range: 3950 – 6620 ft. Blooming period: July - September. Quad: Big Pine. Only recorded occurrence is historic (1978) along West edge of Klondike Lake.
Tetradymia tetrameres	Dune horsebrush	2B.2	No	No	No; species is out of elevation range: 5590 – 6910 ft.
Thelypodium integrifolium ssp. Complanatum	Foxtail thelypodium	2B.2	No	No	No; habitat (mesic areas) is absent within the BSA.
Transberingia bursifolia ssp. Virgata	Virgate halimolobos	2B.3	No	No	No; habitat (meadows and seeps, Pinyon and Juniper woodland) is absent within the BSA.
Viola pinetorum ssp. Grisea	Grey-leaved violet	1B.2	No	No	No; species is out of elevation range: 5180 – 12,140 ft.

Key: CDFW_WL – state watchlist; CDFW_FP – state fully protected; CDFW_SSC – state species of special concern; BLM_S – BLM sensitive; Caltrans_FP – Caltrans fully protected; 1.B.1-3 = CA Native Plant Society Rank. 1B plants are rare, threatened or endangered in CA and elsewhere; 2.B.1-1 = CA Native Plant Society Rank. 2B plants are rare, threatened or endangered in CA but more common elsewhere.

Waters of the U.S. Evaluation:

Waters of the U.S. (WOUS) do not occur within the Project limits; therefore, no WOUS will be impacted by the proposed project.

National Marine Fisheries Service Evaluation:

This Project is not within the jurisdiction of NMFS (National Marine Fisheries Service) and so no NMFS species list was included.

This project will have **No Effect** on any of the state special-status species in the attached species lists (Appendices A-D).

Avoidance Measures:

- Notify the Biologist at least 2 months prior to the start of any new mining operations; this includes both the start of mining operations at the site and any additional operations (ie. new phase) that are initiated on undisturbed ground.
- Pre-construction nesting bird surveys will be conducted by a staff Biologist between Feb. 15-Sept. 30 within the 72 hours prior to the start of new mining operations. Survey 250 feet from the PIA for songbirds, including ground-nesting birds, and 500 feet from the PIA for nesting raptors.
    - If nesting birds are found within 250 feet (songbirds) or 500 feet (raptors) of the PIA, a no work buffer will be implemented until a staff Biologist determines that there are no longer active nests within the buffered area.
- Focused reptile surveys for the common/northern sagebrush lizard will be conducted prior to the start of new mining operations by a staff Biologist within the species' active period (Spring – fall).
    - Any individuals observed within the BSA will be noted, and further avoidance and minimization measures will be determined through consultation with the BLM.
- Rare plant surveys will be conducted prior to the start of new mining operations by a staff Biologist within the active blooming periods for sensitive-status plants that have potential to occur within the PIA.
    - Any individuals observed within the PIA will be translocated, under the guidance of the BLM.

Rationale:

The Project Impact Area (PIA) is located within a previously disturbed area. Existing human activity and disturbance (environmental alteration, roads, vehicle presence, and noise) within the PIA make the area unsuitable habitat for sensitive-status species.

The Biological Study Area (BSA) extends outside the PIA, covering the entire 55-acre property. The BSA contains the shadscale scrub vegetation alliance and exists within an alluvial fan topography. Vegetation within the BSA, though sparse, is diverse in species. In areas where

native vegetation exists and disturbance is limited, there is potential habitat for that sensitive-status species.

Common/northern sagebrush lizard has potential to occur within the BSA. This species is known to occur in the Inyo mountains and has been observed within 5 miles of the BSA. To avoid any potential impacts to this species, focused reptile surveys will be conducted within the species' active period prior to construction. If any individuals are observed within the BSA, Caltrans will consult with the BLM (Bishop Office) to determine appropriate avoidance and/or minimization measures.

Several rare plant species (Coyote gilia, Shockley's milk vetch, King's eyelash grass, Wheeler's dune-broom, MacDougal's lomatium, Intermontane lupine, Nevada oryctes) have potential to occur within the BSA. These species are associated with Great Basin shrub and have been observed within 5 miles of the BSA. To avoid any potential impacts to these species, rare plant surveys will be conducted prior to construction. Any individuals observed within the BSA will either be translocated, based on guidance from the BLM, or flagged for avoidance.

With the implementation of the avoidance and minimization measures, no impacts to any sensitive-status species are expected.

If you have any questions regarding this memo, please contact Dannique Aalbu, District Biologist, at (760)872-0763 or Dannique.aalbu@dot.ca.gov

Dannique Aalbu
Associate Environmental Planner/Biologist
District 9- Environmental

Appendices
Appendix A: USFWS Species List
Appendix B: CDFW Species List
Appendix C: CNPS Species List
Appendix D: BLM Species Lists

Appendix A: USFWS Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301
http://www.fws.gov/nevada/

In Reply Refer To:
Consultation Code: 08ENVD00-2020-SLI-0461
Event Code: 08ENVD00-2020-E-01245
Project Name: Zurich Material Site

June 01, 2020

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 attached species list indicates threatened, endangered, proposed, and candidate species and designated or proposed critical habitat 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 U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act of 1973, as amended (ESA, 16 U.S.C. 1531 *et seq*.), for projects that are authorized, funded, or carried out by a Federal agency. Candidate species have no protection under the ESA but are included for consideration because they could be listed prior to the completion of your project. Consideration of these species during project planning may assist species conservation efforts and may prevent the need for future listing actions. For additional information regarding species that may be found in the proposed project area, visit http://www.fws.gov/nevada/es/ipac.html.

The purpose of the ESA 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 ESA 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 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. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html.

If a Federal action 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.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this species list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally listed, proposed, 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 ESA, 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 attached list.

The Nevada Fish and Wildlife Office (NFWO) no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

For a list of at-risk species by county, visit Heritage's website (http://heritage.nv.gov). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (http://heritage.nv.gov/get_data) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (http://www.leg.state.nv.us/NAC/NAC-503.html). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to take, or possess any parts of protected fish and wildlife species. Please visit http://www.ndow.org or contact NDOW in northern Nevada (775) 688-1500, in southern Nevada (702) 486-5127, or in eastern Nevada (775) 777-2300.

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 Service's wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

The Service's Pacific Southwest Region developed the *Interim Guidelines for the Development of a Project Specific Avian and Bat Protection Plan for Wind Energy Facilities* (Interim Guidelines). This document provides energy facility developers with a tool for assessing the risk of potential impacts to wildlife resources and delineates how best to design and operate a bird- and bat-friendly wind facility. These Interim Guidelines are available upon request from the NFWO. The intent of a Bird and Bat Conservation Strategy is to conserve wildlife resources while supporting project developers through: (1) establishing project development in an adaptive management framework; (2) identifying proper siting and project design strategies; (3) designing and implementing pre-construction surveys; (4) implementing appropriate conservation measures for each development phase; (5) designing and implementing appropriate post-construction monitoring strategies; (6) using post-construction studies to better understand the dynamics of mortality reduction (*e.g.*, changes in blade cut-in speed, assessments of blade “feathering” success, and studies on the effects of visual and acoustic deterrents) including efforts tied into Before-After/Control-Impact analysis; and (7) conducting a thorough risk assessment and validation leading to adjustments in management and mitigation actions.

The template and recommendations set forth in the Interim Guidelines were based upon the Avian Powerline Interaction Committee's Avian Protection Plan template (http://www.aplic.org/) developed for electric utilities and modified accordingly to address the unique concerns of wind energy facilities. These recommendations are also consistent with the Service's wind energy guidelines. We recommend contacting us as early as possible in the planning process to discuss the need and process for developing a site-specific Bird and Bat Conservation Strategy.

The Service has also developed guidance regarding wind power development in relation to prairie grouse leks (sage-grouse are included in this). This document can be found at: http://www.fws.gov/southwest/es/Oklahoma/documents/te_species/wind%20power/prairie%20grouse%20lek%205%20mile%20public.pdf.

Migratory Birds are a Service Trust Resource. Based on the Service's conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act of 1918, as amended (MBTA; 16 U.S.C. 703 *et seq*.), we recommend that any land clearing or other surface disturbance associated with proposed actions within the project area be timed to

avoid potential destruction of bird nests or young, or birds that breed in the area. Such destruction may be in violation of the MBTA. Under the MBTA, nests with eggs or young of migratory birds may not be harmed, nor may migratory birds be killed. Therefore, we recommend land clearing be conducted outside the avian breeding season. If this is not feasible, we recommend a qualified biologist survey the area prior to land clearing. If nests are located, or if other evidence of nesting (*i.e.*, mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Guidance for minimizing impacts to migratory birds for projects involving 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.

If wetlands, springs, or streams are are known to occur in the project area or are present in the vicinity of the project area, we ask that you be aware of potential impacts project activities may have on these habitats. Discharge of fill material into wetlands or waters of the United States is regulated by the U.S. Army Corps of Engineers (ACOE) pursuant to section 404 of the Clean Water Act of 1972, as amended. We recommend you contact the ACOE's Regulatory Section regarding the possible need for a permit. For projects located in northern Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Mineral, Pershing, Storey, and Washoe Counties) contact the Reno Regulatory Office at 300 Booth Street, Room 3060, Reno, Nevada 89509, (775) 784-5304; in southern Nevada (Clark, Lincoln, Nye, and White Pine Counties) contact the St. George Regulatory Office at 321 North Mall Drive, Suite L-101, St. George, Utah 84790-7314, (435) 986-3979; or in California along the eastern Sierra contact the Sacramento Regulatory Office at 650 Capitol Mall, Suite 5-200, Sacramento, California 95814, (916) 557-5250.

We appreciate your concern for threatened and endangered species. 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.

The table below outlines lead FWS field offices by county and land ownership/project type. Please refer to this table when you are ready to coordinate (including requests for section 7 consultation) with the field office corresponding to your project, and send any documentation regarding your project to that corresponding office. Therefore, the lead FWS field office may not be the office listed above in the letterhead.

Lead FWS offices by County and Ownership/Program

County	Ownership/Program	Species	Office Lead*

Alameda	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Alameda	All ownerships but tidal/estuarine	All	SFWO
Alpine	Humboldt Toiyabe National Forest	All	RFWO
Alpine	Lake Tahoe Basin Management Unit	All	RFWO
Alpine	Stanislaus National Forest	All	SFWO
Alpine	El Dorado National Forest	All	SFWO
Colusa	Mendocino National Forest	All	AFWO
Colusa	Other	All	By jurisdiction (see map)
Contra Costa	Legal Delta (Excluding ECCHCP)	All	BDFWO
Contra Costa	Antioch Dunes NWR	All	BDFWO
Contra Costa	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Contra Costa	All ownerships but tidal/estuarine	All	SFWO
Del Norte	All	All	AFWO
El Dorado	El Dorado National Forest	All	SFWO
El Dorado	LakeTahoe Basin Management Unit		RFWO
Glenn	Mendocino National Forest	All	AFWO
Glenn	Other	All	By jurisdiction (see map)
Humboldt	All except Shasta Trinity National Forest	All	AFWO

Humboldt	Shasta Trinity National Forest	All	YFWO
Lake	Mendocino National Forest	All	AFWO
Lake	Other	All	By jurisdiction (see map)
Lassen	Modoc National Forest	All	KFWO
Lassen	Lassen National Forest	All	SFWO
Lassen	Toiyabe National Forest	All	RFWO
Lassen	BLM Surprise and Eagle Lake Resource Areas	All	RFWO
Lassen	BLM Alturas Resource Area	All	KFWO
Lassen	Lassen Volcanic National Park	All (includes Eagle Lake trout on all ownerships)	SFWO
Lassen	All other ownerships	All	By jurisdiction (see map)
Marin	Tidal wetlands/marsh adjacent to Bays	Salt marsh species, delta smelt	BDFWO
Marin	All ownerships but tidal/estuarine	All	SFWO
Mendocino	Russian River watershed	All	SFWO
Mendocino	All except Russian River watershed	All	AFWO
Modoc	Modoc National Forest	All	KFWO
Modoc	BLM Alturas Resource Area	All	KFWO
Modoc	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Modoc	BLM Surprise and Eagle Lake Resource Areas	All	RFWO

Modoc	All other ownerships	All	By jurisdiction (See map)
Mono	Inyo National Forest	All	RFWO
Mono	Humboldt Toiyabe National Forest	All	RFWO
Napa	All ownerships but tidal/estuarine	All	SFWO
Napa	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Nevada	Humboldt Toiyabe National Forest	All	RFWO
Nevada	All other ownerships	All	By jurisdiction (See map)
Placer	Lake Tahoe Basin Management Unit	All	RFWO
Placer	All other ownerships	All	SFWO
Sacramento	Legal Delta	Delta Smelt	BDFWO
Sacramento	Other	All	By jurisdiction (see map)
San Francisco	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Francisco	All ownerships but tidal/estuarine	All	SFWO
San Mateo	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
San Mateo	All ownerships but tidal/estuarine	All	SFWO
San Joaquin	Legal Delta excluding San Joaquin HCP	All	BDFWO

San Joaquin	Other	All	SFWO
Santa Clara	Tidal wetlands/marsh adjacent to San Francisco Bay	Salt marsh species, delta smelt	BDFWO
Santa Clara	All ownerships but tidal/estuarine	All	SFWO
Shasta	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Shasta	Hat Creek Ranger District	All	SFWO
Shasta	Bureau of Reclamation (Central Valley Project)	All	BDFWO
Shasta	Whiskeytown National Recreation Area	All	YFWO
Shasta	BLM Alturas Resource Area	All	KFWO
Shasta	Caltrans	By jurisdiction	SFWO/AFWO
Shasta	Ahjumawi Lava Springs State Park	Shasta crayfish	SFWO
Shasta	All other ownerships	All	By jurisdiction (see map)
Shasta	Natural Resource Damage Assessment, all lands	All	SFWO/BDFWO
Sierra	Humboldt Toiyabe National Forest	All	RFWO
Sierra	All other ownerships	All	SFWO
Siskiyou	Klamath National Forest (except Ukonom District)	All	YFWO
Siskiyou	Six Rivers National Forest and Ukonom District	All	AFWO
Siskiyou	Shasta Trinity National Forest	All	YFWO

Siskiyou	Lassen National Forest	All	SFWO
Siskiyou	Modoc National Forest	All	KFWO
Siskiyou	Lava Beds National Volcanic Monument	All	KFWO
Siskiyou	BLM Alturas Resource Area	All	KFWO
Siskiyou	Klamath Basin National Wildlife Refuge Complex	All	KFWO
Siskiyou	All other ownerships	All	By jurisdiction (see map)
Solano	Suisun Marsh	All	BDFWO
Solano	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Solano	All ownerships but tidal/estuarine	All	SFWO
Solano	Other	All	By jurisdiction (see map)
Sonoma	Tidal wetlands/marsh adjacent to San Pablo Bay	Salt marsh species, delta smelt	BDFWO
Sonoma	All ownerships but tidal/estuarine	All	SFWO
Tehama	Mendocino National Forest	All	AFWO
Tehama	Shasta Trinity National Forest except Hat Creek Ranger District (administered by Lassen National Forest)	All	YFWO
Tehama	All other ownerships	All	By jurisdiction (see map)
Trinity	BLM	All	AFWO
Trinity	Six Rivers National Forest	All	AFWO
Trinity	Shasta Trinity National Forest	All	YFWO

Trinity	Mendocino National Forest	All	AFWO
Trinity	BIA (Tribal Trust Lands)	All	AFWO
Trinity	County Government	All	AFWO
Trinity	All other ownerships	All	By jurisdiction (See map)
Yolo	Yolo Bypass	All	BDFWO
Yolo	Other	All	By jurisdiction (see map)
All	FERC-ESA	All	By jurisdiction (see map)
All	FERC-ESA	Shasta crayfish	SFWO
All	FERC-Relicensing (non-ESA)	All	BDFWO

***Office Leads:**

AFWO=Arcata Fish and Wildlife Office

BDFWO=Bay Delta Fish and Wildlife Office

KFWO=Klamath Falls Fish and Wildlife Office

RFWO=Reno Fish and Wildlife Office

YFWO=Yreka Fish and Wildlife Office

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

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:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

Project Summary

Consultation Code: 08ENVD00-2020-SLI-0461

Event Code: 08ENVD00-2020-E-01245

Project Name: Zurich Material Site

Project Type: TRANSPORTATION

Project Description: The California Department of Transportation (Caltrans) is proposing to establish Zurich Material Site (MS 308) [a former material site] for mining of shale near Big Pine, California. A new highway easement deed will be needed from the Bureau of Land Management (BLM Bishop Field Office) for approximately 55.5 acres. Of those 55.5 acres, disturbance caused by mining operations will be limited to approximately 13.9 acres. Approximately 336,000 cubic yards of material will be extracted from the site over a minimum 50-year lifespan.

The material site will be mined in two separate phases. For the first phase, the existing surface of the pit will be excavated to a depth of up to 10 feet. The first phase will also involve the reestablishment of a previously rehabilitated access road, construction of check dams (n=4) and diversion channels (n=2), and the installation of an access gate and earthen berm road block. The second phase of mining will see the pit surface further excavated to a maximum depth of up to 38 feet. The pit will be graded to ensure internal drainage. Topsoil (approximately 4 to 6 inches in depth) will be relocated to soil berms on the outer perimeter of the pit for post mining reclamation purposes.

Upon completion of the extraction of all material to the final grade lines, the final slopes will be reclaimed in accordance with SMARA regulations. Topsoil berms will be removed and spread evenly on all slopes. It is Caltrans' intent to rescind this site back to the Bureau of Land Management after mining resources are exhausted and slopes are reclaimed. Upon final site configuration and revegetation, a final SMARA reclamation inspection will be performed to retire the associated mine ID and commence with the intended end-use (natural resources- open space designation). At this point, no further mining activities will occur at the site.

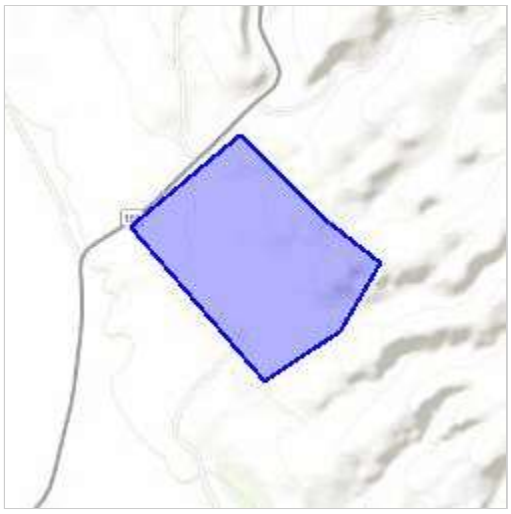
The material site's purpose is to provide quality material for District 9 maintenance forces for use in highway maintenance work in northern Inyo County and southern Mono County. The scale at the material site is the ideal material for shoulder backing and other material intensive

maintenance activities. The development of the site coincides with District 9's strategic plan for establishing material sources within reasonable haul proximity.

All 55.5 acres will be subject to the environmental clearance.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/37.19304003945417N118.2430758568293W



Counties: Inyo, CA

Endangered Species Act Species

There is a total of 2 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.

Fishes

NAME	STATUS
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/233/office/14320.pdf	Threatened
Owens Pupfish *Cyprinodon radiosus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4982	Endangered

Critical habitats

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

USFWS National Wildlife Refuge Lands And Fish Hatcheries

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

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

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

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

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10

NAME	BREEDING SEASON
Brewer's Sparrow *Spizella breweri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9291	Breeds May 15 to Aug 10
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Golden Eagle *Aquila chrysaetos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Green-tailed Towhee *Pipilo chlorurus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9444	Breeds May 1 to Aug 10
Long-billed Curlew *Numenius americanus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds Apr 1 to Jul 31
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay *Gymnorhinus cyanocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Sage Thrasher *Oreoscoptes montanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10
Sagebrush Sparrow *Artemisiospiza nevadensis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 15 to Jul 31
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5

Probability Of Presence Summary

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

Probability of Presence (■)

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

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

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

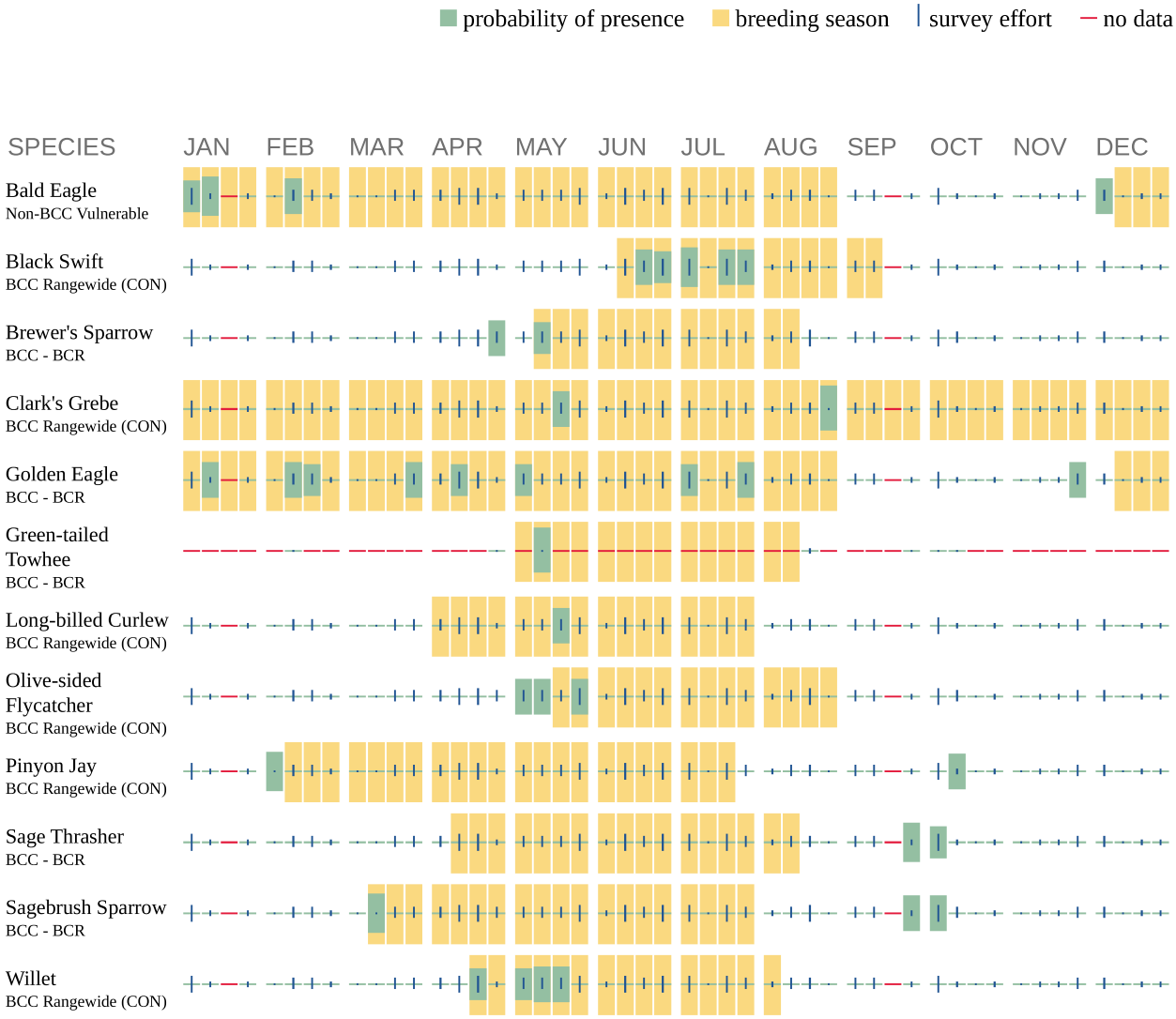
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

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

Survey Timeframe

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



Additional information can be found using the following links:

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

Migratory Birds FAQ

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

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

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

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

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

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

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

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

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

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

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

Wetlands

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

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

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R4SBC

Appendix B: CDFW Species List

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Uhlmeyer Spring (3711822) OR Big Pine (3711823) OR Waucoba Mtn. (3711811) OR Tinemaha Reservoir (3711812) OR Poleta Canyon (3711833) OR Westgard Pass (3711832) OR Deep Springs Lake (3711831) OR Cowhorn Valley (3711821) OR Fish Springs (3711813))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Accipiter cooperii Cooper's hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	4,480 4,480	118 S:1	0	0	0	0	0	1	1	0	1	0	0
Aliciella triodon coyote gilia	G5 S2	None None	Rare Plant Rank - 2B.2	3,951 3,951	11 S:1	0	0	0	0	0	1	0	1	1	0	0
Allium atrorubens var. atrorubens Great Basin onion	G4T4 S2	None None	Rare Plant Rank - 2B.3	5,380 5,380	19 S:1	0	0	0	0	0	1	0	1	1	0	0
Anaxyrus exsul black toad	G1 S1	None Threatened	BLM_S-Sensitive CDFW_FP-Fully Protected IUCN_VU-Vulnerable USFS_S-Sensitive	4,940 5,680	6 S:5	0	1	2	0	0	2	4	1	5	0	0
Asio otus long-eared owl	G5 S3?	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	4,000 4,000	48 S:1	0	0	0	0	0	1	1	0	1	0	0
Astragalus geyeri var. geyeri Geyer's milk-vetch	G4T4 S2	None None	Rare Plant Rank - 2B.2	5,100 5,100	24 S:1	0	0	0	0	0	1	1	0	1	0	0
Astragalus serenoi var. shockleyi Shockley's milk-vetch	G4T3 S3	None None	Rare Plant Rank - 2B.2	3,900 7,100	25 S:11	0	1	1	1	0	8	2	9	11	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	3,930 5,150	1989 S:3	1	0	1	0	0	1	2	1	3	0	0
Atriplex gardneri var. falcata falcate saltbush	G4T4Q S2S3	None None	Rare Plant Rank - 2B.2	4,100 4,100	9 S:1	0	0	0	0	0	1	1	0	1	0	0
Blepharidachne kingii King's eyelash grass	G4 S2	None None	Rare Plant Rank - 2B.3	4,100 5,600	22 S:4	0	0	0	0	0	4	4	0	4	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Boechera bodiensis Bodie Hills rockcress	G3 S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive USFS_S-Sensitive	6,750 8,875	33 S:3	0	0	0	0	0	3	1	2	3	0	0
Boechera dispar pinyon rockcress	G3 S3	None None	Rare Plant Rank - 2B.3 SB_RSABG-Rancho Santa Ana Botanic Garden	4,700 8,200	97 S:11	0	2	1	0	0	8	3	8	11	0	0
Boechera lincolnensis Lincoln rockcress	G4G5 S3	None None	Rare Plant Rank - 2B.3 BLM_S-Sensitive	5,800 5,800	14 S:1	0	0	0	0	0	1	1	0	1	0	0
Boechera pendulina rabbit-ear rockcress	G5 S2	None None	Rare Plant Rank - 2B.1	10,300 10,300	9 S:1	0	0	0	0	0	1	1	0	1	0	0
Boechera shockleyi Shockley's rockcress	G3 S2	None None	Rare Plant Rank - 2B.2 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	6,000 7,840	61 S:12	0	2	0	0	0	10	1	11	12	0	0
Bombus morrisoni Morrison bumble bee	G4G5 S1S2	None None	IUCN_VU-Vulnerable	4,000 8,600	85 S:9	0	0	0	0	0	9	9	0	9	0	0
Bristlecone Pine Forest Bristlecone Pine Forest	G4 S2.3	None None		10,000 10,800	2 S:2	0	0	0	0	0	2	2	0	2	0	0
Buteo swainsoni Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	3,670 4,660	2518 S:10	0	0	0	0	0	10	8	2	10	0	0
Calochortus excavatus Inyo County star-tulip	G2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive USFS_S-Sensitive	3,840 6,700	70 S:18	0	5	7	1	0	5	7	11	18	0	0
Catostomus fumeiventris Owens sucker	G3G4 S3	None None	CDFW_SSC-Species of Special Concern	3,850 4,040	35 S:3	0	0	0	0	0	3	2	1	3	0	0
Chaetadelpha wheeleri Wheeler's dune-broom	G4 S2	None None	Rare Plant Rank - 2B.2	4,100 4,100	25 S:1	0	0	0	0	0	1	1	0	1	0	0
Charadrius alexandrinus nivosus western snowy plover	G3T3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	3,860 4,900	138 S:2	0	0	0	0	0	2	2	0	2	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Charadrius montanus mountain plover	G3 S2S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	3,880 3,880	90 S:1	0	0	0	0	0	1	1	0	1	0	0
Circus hudsonius northern harrier	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	4,100 4,100	53 S:1	0	0	0	0	0	1	1	0	1	0	0
Coccyzus americanus occidentalis western yellow-billed cuckoo	G5T2T3 S1	Threatened Endangered	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	3,870 4,480	164 S:3	0	3	0	0	0	0	2	1	3	0	0
Corynorhinus townsendii Townsend's big-eared bat	G3G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	4,040 8,600	635 S:26	0	1	0	0	0	25	10	16	26	0	0
Crepis runcinata fiddleleaf hawksbeard	G5 S3	None None	Rare Plant Rank - 2B.2	4,800 4,941	32 S:2	0	0	0	0	0	2	1	1	2	0	0
Cryptantha fendleri sand dune cryptantha	G5 S1	None None	Rare Plant Rank - 2B.2	7,250 7,250	2 S:1	0	1	0	0	0	0	0	1	1	0	0
Cuniculotinus gramineus Panamint rock-goldenrod	G3G4 S3	None None	Rare Plant Rank - 2B.3	9,050 9,050	10 S:2	0	0	0	0	0	2	2	0	2	0	0
Cyprinodon radiosus Owens pupfish	G1 S1	Endangered Endangered	AFS_EN-Endangered CDFW_FP-Fully Protected IUCN_EN-Endangered	3,960 4,240	23 S:7	0	0	0	0	6	1	5	2	1	1	5
Dedeckera eurekensis July gold	G3 S3	None Rare	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_BerrySB-Berry Seed Bank USFS_S-Sensitive	4,800 5,900	29 S:2	0	1	0	0	0	1	1	1	2	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Diplacus parryi Parry's monkeyflower	G4G5 S3	None None	Rare Plant Rank - 2B.3	5,500 8,500	13 S:9	0	0	0	0	0	9	8	1	9	0	0
Elgaria panamintina Panamint alligator lizard	G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	5,186 6,860	25 S:6	5	1	0	0	0	0	0	6	6	0	0
Elymus scribneri Scribner's wheat grass	G5 S3	None None	Rare Plant Rank - 2B.3	10,000 10,000	12 S:1	0	0	0	0	0	1	0	1	1	0	0
Empidonax traillii extimus southwestern willow flycatcher	G5T2 S1	Endangered Endangered	NABCI_RWL-Red Watch List	3,880 3,880	70 S:1	0	1	0	0	0	0	0	1	1	0	0
Eremothera boothii ssp. boothii Booth's evening-primrose	G5T4 S3	None None	Rare Plant Rank - 2B.3	5,000 5,000	35 S:1	0	0	0	0	0	1	1	0	1	0	0
Eremothera boothii ssp. intermedia Booth's hairy evening-primrose	G5T3T4 S3	None None	Rare Plant Rank - 2B.3	6,900 6,900	14 S:2	0	0	0	0	0	2	2	0	2	0	0
Ericameria gilmanii Gilman's goldenbush	G2 S2	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	7,200 7,200	7 S:1	0	1	0	0	0	0	0	1	1	0	0
Erigeron compactus compact daisy	G3 S3	None None	Rare Plant Rank - 2B.3	6,700 8,600	13 S:11	0	0	0	0	0	11	5	6	11	0	0
Erythranthe calcicola limestone monkeyflower	G3 S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden	6,800 6,800	15 S:1	0	0	0	0	0	1	0	1	1	0	0
Euderma maculatum spotted bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern WBWG_H-High Priority	4,040 4,040	68 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Falco mexicanus prairie falcon	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	7,313 7,313	460 S:1	0	0	0	0	0	1	1	0	1	0	0
Fimbristylis thermalis hot springs fimbristylis	G4 S1S2	None None	Rare Plant Rank - 2B.2 SB_RSABG-Rancho Santa Ana Botanic Garden	4,000 4,000	19 S:2	0	0	0	0	0	2	1	1	2	0	0
Fontelicella sp. Deep Springs fontelicella	G1 S1	None None		4,940 4,940	1 S:1	0	0	0	0	0	1	1	0	1	0	0
Grusonia pulchella beautiful cholla	G4 S2	None None	Rare Plant Rank - 2B.2	5,120 5,120	11 S:1	0	1	0	0	0	0	0	1	1	0	0
Haliaeetus leucocephalus bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive USFWS_BCC-Birds of Conservation Concern	3,850 3,850	327 S:1	0	0	0	0	0	1	1	0	1	0	0
Hesperidanthus jaegeri Jaeger's hesperidanthus	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	7,250 7,250	7 S:1	0	1	0	0	0	0	0	1	1	0	0
Hymenopappus filifolius var. nanus little cutleaf	G5T4 S3	None None	Rare Plant Rank - 2B.3	6,600 11,000	19 S:8	0	0	0	0	0	8	6	2	8	0	0
Icteria virens yellow-breasted chat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	4,660 4,660	100 S:1	0	0	0	0	0	1	1	0	1	0	0
Jaffueliobryum wrightii Wright's jaffueliobryum moss	G5 S2S3	None None	Rare Plant Rank - 2B.3	8,600 8,600	21 S:1	0	0	0	0	0	1	1	0	1	0	0
Juncus nodosus knotted rush	G5 S3	None None	Rare Plant Rank - 2B.3	5,600 5,600	12 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasiurus cinereus hoary bat	G5 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		238 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

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Lepus townsendii townsendii western white-tailed jackrabbit	G5T5 S3?	None None	CDFW_SSC-Species of Special Concern	4,140 4,140	24 S:1	0	0	0	0	0	1	1	0	1	0	0
Lithobates pipiens northern leopard frog	G5 S2	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	100 4,370	19 S:3	0	0	0	0	0	3	3	0	3	0	0
Loeflingia squarrosa var. artemisiarum sagebrush loeflingia	G5T3 S2	None None	Rare Plant Rank - 2B.2 BLM_S-Sensitive	3,820 3,980	26 S:5	1	1	0	0	0	3	5	0	5	0	0
Lomatium foeniculaceum ssp. macdougalii Macdougal's lomatium	G5T4T5 S3	None None	Rare Plant Rank - 2B.2		26 S:1	0	0	0	0	0	1	1	0	1	0	0
Lupinus pusillus var. intermontanus intermontane lupine	G5T5? S2	None None	Rare Plant Rank - 2B.3	3,900 3,900	19 S:1	0	0	0	0	0	1	1	0	1	0	0
Microtus californicus vallicola Owens Valley vole	G5T3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern		14 S:1	0	0	0	0	0	1	1	0	1	0	0
Myotis ciliolabrum western small-footed myotis	G5 S3	None None	BLM_S-Sensitive IUCN_LC-Least Concern WBWG_M-Medium Priority	4,100 7,320	82 S:2	0	0	0	0	0	2	2	0	2	0	0
Oenothera longissima long-stem evening-primrose	G4 S1	None None	Rare Plant Rank - 2B.2	5,600 5,600	4 S:1	0	0	0	0	0	1	1	0	1	0	0
Oryctes nevadensis Nevada oryctes	G3 S2	None None	Rare Plant Rank - 2B.1	3,930 4,090	33 S:17	0	13	2	0	0	2	17	0	17	0	0
Ovis canadensis nelsoni desert bighorn sheep	G4T4 S3	None None	BLM_S-Sensitive CDFW_FP-Fully Protected USFS_S-Sensitive		46 S:1	0	0	0	0	1	0	1	0	0	0	1
Pandion haliaetus osprey	G5 S4	None None	CDF_S-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	3,870 3,870	504 S:1	0	0	0	0	0	1	1	0	1	0	0
Parnopes borregoensis Borrego parnopes cuckoo wasp	G1G2 S1S2	None None		4,000 4,000	4 S:1	0	0	0	0	0	1	1	0	1	0	0
Phacelia inyoensis Inyo phacelia	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive USFS_S-Sensitive	3,000 4,000	19 S:4	1	0	0	0	0	3	4	0	4	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Physocarpus alternans Nevada ninebark	G4 S3	None None	Rare Plant Rank - 2B.3	6,235 6,975	14 S:5	0	0	0	0	0	5	1	4	5	0	0
Piranga rubra summer tanager	G5 S1	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	4,480 4,480	21 S:1	0	0	0	0	0	1	1	0	1	0	0
Plagiobothrys nitens shiny-nutlet popcornflower	GNR S1	None None	Rare Plant Rank - 2B.1	4,950 4,950	1 S:1	0	0	0	0	0	1	0	1	1	0	0
Plagiobothrys parishii Parish's popcornflower	G1 S1	None None	Rare Plant Rank - 1B.1 SB_RSABG-Rancho Santa Ana Botanic Garden USFS_S-Sensitive	3,945 4,100	16 S:3	0	0	0	0	0	3	1	2	3	0	0
Plagiobothrys salsus desert popcornflower	G2G3 S1	None None	Rare Plant Rank - 2B.2	4,941 4,941	5 S:1	0	0	0	0	0	1	0	1	1	0	0
Plebejus icarioides albihalos White Mountains icarioides blue butterfly	G5T2T3 S2?	None None		7,680 7,680	4 S:1	0	0	0	0	0	1	1	0	1	0	0
Pyrgulopsis owensensis Owens Valley springsnail	G1G2 S1S2	None None	USFS_S-Sensitive	1,230 6,000	10 S:7	0	5	1	0	0	1	7	0	7	0	0
Pyrgulopsis wongi Wong's springsnail	G2 S2	None None	IUCN_LC-Least Concern USFS_S-Sensitive	1,400 6,845	50 S:10	0	0	4	0	0	6	8	2	10	0	0
Rhinichthys osculus ssp. 2 Owens speckled dace	G5T1T2Q S1S2	None None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern	3,850 4,240	28 S:2	0	0	0	0	2	0	2	0	0	2	0
Riparia riparia bank swallow	G5 S2	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	3,920 3,920	298 S:1	0	0	0	0	0	1	1	0	1	0	0
Sidalcea covillei Owens Valley checkerbloom	G2 S2	None Endangered	Rare Plant Rank - 1B.1 BLM_S-Sensitive	3,920 4,650	43 S:11	0	7	3	1	0	0	3	8	11	0	0
Siphateles bicolor snyderi Owens tui chub	G4T1 S1	Endangered Endangered	AFS_EN-Endangered	3,880 4,240	20 S:4	0	1	0	0	2	1	2	2	2	1	1
Sphenopholis obtusata prairie wedge grass	G5 S2	None None	Rare Plant Rank - 2B.2	4,700 4,700	19 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Suaeda occidentalis western seablite	G5 S2	None None	Rare Plant Rank - 2B.3	4,000 4,000	9 S:1	0	0	0	0	0	1	0	1	1	0	0
Tetradymia tetrameres dune horsebrush	G4 S2	None None	Rare Plant Rank - 2B.2	5,600 5,600	10 S:1	0	1	0	0	0	0	0	1	1	0	0
Thelypodium integrifolium ssp. complanatum foxtail thelypodium	G5T4T5 S2	None None	Rare Plant Rank - 2B.2	7,000 7,000	13 S:1	0	0	0	0	0	1	1	0	1	0	0
Transberingia bursifolia ssp. virgata virgate halimolobos	G4T4 S2	None None	Rare Plant Rank - 2B.3	7,900 7,900	9 S:1	0	0	0	0	0	1	1	0	1	0	0
Transmontane Alkali Marsh Transmontane Alkali Marsh	G3 S2.1	None None		4,920 5,680	7 S:2	0	0	0	0	0	2	2	0	2	0	0
Viola pinetorum ssp. grisea grey-leaved violet	G4G5T3 S3	None None	Rare Plant Rank - 1B.2	7,950 7,950	90 S:1	0	0	0	0	0	1	0	1	1	0	0
Water Birch Riparian Scrub Water Birch Riparian Scrub	GNR SNR	None None		4,900 6,600	29 S:5	0	0	0	0	0	5	5	0	5	0	0

Appendix C: CNPS Species List

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

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

Search Criteria

California Rare Plant Rank is one of **[1A, 1B, 2A, 2B]**, Found in Quads **3711833, 3711832, 3711831, 3711823, 3711822, 3711821, 3711813 3711812** and **3711811**;

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
Aliciella triodon	coyote gilia	Polemoniaceae	annual herb	Apr-Jun	2B.2	S2	G5
Allium atrorubens var. atrorubens	Great Basin onion	Alliaceae	perennial bulbiferous herb	May-Jun	2B.3	S2	G4T4
Astragalus geyeri var. geyeri	Geyer's milk-vetch	Fabaceae	annual herb	May-Aug	2B.2	S2	G4T4
Astragalus serenoi var. shockleyi	Shockley's milk-vetch	Fabaceae	perennial herb	(Apr)May-Jul	2B.2	S2	G4T3
Atriplex gardneri var. falcata	falcate saltbush	Chenopodiaceae	perennial herb	May-Aug	2B.2	S2S3	G4T4Q
Blepharidachne kingii	King's eyelash grass	Poaceae	perennial herb	May	2B.3	S2	G4
Boechera bodiensis	Bodie Hills rockcress	Brassicaceae	perennial herb	Jun-Jul(Aug)	1B.3	S3	G3
Boechera dispar	pinyon rockcress	Brassicaceae	perennial herb	Mar-Jun	2B.3	S3	G3
Boechera lincolnensis	Lincoln rockcress	Brassicaceae	perennial herb	Mar-May	2B.3	S3	G4G5

Boechera shockleyi	Shockley's rockcress	Brassicaceae	perennial herb	May-Jun	2B.2	S2	G3
Calochortus excavatus	Inyo County star-tulip	Liliaceae	perennial bulbiferous herb	Apr-Jul	1B.1	S2	G2
Chaetadelpha wheeleri	Wheeler's dune-broom	Asteraceae	perennial rhizomatous herb	Apr-Sep	2B.2	S2	G4
Crepis runcinata	fiddleleaf hawksbeard	Asteraceae	perennial herb	May-Aug	2B.2	S3	G5
Cryptantha fendleri	sand dune cryptantha	Boraginaceae	annual herb	Jun-Jul	2B.2	S1	G5
Cuniculotinus gramineus	Panamint rock-goldenrod	Asteraceae	perennial herb	Jun-Aug	2B.3	S3	G3G4
Dedeckera eurekensis	July gold	Polygonaceae	perennial deciduous shrub	May-Aug	1B.3	S3	G3
Diplacus parryi	Parry's monkeyflower	Phrymaceae	annual herb	May-Jul	2B.3	S3	G4G5
Eremothera boothii ssp. boothii	Booth's evening-primrose	Onagraceae	annual herb	Apr-Sep	2B.3	S3	G5T4
Eremothera boothii ssp. intermedia	Booth's hairy evening-primrose	Onagraceae	annual herb	(May)Jun	2B.3	S3	G5T3T4
Ericameria gilmanii	Gilman's goldenbush	Asteraceae	perennial shrub	Aug-Sep	1B.3	S2	G2
Erigeron compactus	compact daisy	Asteraceae	perennial herb	May-Jul	2B.3	S3	G3
Erythranthe calcicola	limestone monkeyflower	Phrymaceae	annual herb	Apr-Jun	1B.3	S3	G3
Fimbristylis thermalis	hot springs fimbristylis	Cyperaceae	perennial rhizomatous herb	Jul-Sep	2B.2	S1S2	G4
Grusonia pulchella	beautiful cholla	Cactaceae	perennial stem succulent	May(Jun)	2B.2	S2	G4
Hesperidanthus jaegeri	Jaeger's hesperidanthus	Brassicaceae	perennial herb	May-Jul	1B.2	S2	G2
Hymenopappus filifolius var. nanus	little cutleaf	Asteraceae	perennial herb	May-Sep	2B.3	S3	G5T4
Jaffueliobryum wrightii	Wright's jaffueliobryum moss	Grimmiaceae	moss		2B.3	S2?	G4G5

Juncus nodosus	knotted rush	Juncaceae	perennial rhizomatous herb	Jul-Sep	2B.3	S3	G5
Loeflingia squarrosa var. artemisiarum	sagebrush loeflingia	Caryophyllaceae	annual herb	Apr-May	2B.2	S2	G5T3
Lomatium foeniculaceum ssp. macdougalii	MacDougal's lomatium	Apiaceae	perennial herb	Apr-Jul	2B.2	S3	G5T4T5
Lupinus padre-crowleyi	Father Crowley's lupine	Fabaceae	perennial herb	Jun-Aug	1B.2	S2	G2
Lupinus pusillus var. intermontanus	intermontane lupine	Fabaceae	annual herb	May-Jun	2B.3	S2	G5T5?
Oenothera longissima	long-stem evening-primrose	Onagraceae	annual / perennial herb	Jul-Sep	2B.2	S1	G4
Oryctes nevadensis	Nevada oryctes	Solanaceae	annual herb	Apr-Jun	2B.1	S2	G3
Phacelia inyoensis	Inyo phacelia	Hydrophyllaceae	annual herb	Apr-Aug	1B.2	S3	G3
Physocarpus alternans	Nevada ninebark	Rosaceae	perennial deciduous shrub	Jun-Jul	2B.3	S3	G4
Plagiobothrys nitens	shiny-nutlet popcornflower	Boraginaceae	annual herb	Jun-Jul	2B.1	S1	GNR
Plagiobothrys parishii	Parish's popcornflower	Boraginaceae	annual herb	Mar-Jun(Nov)	1B.1	S1	G1
Plagiobothrys salsus	desert popcornflower	Boraginaceae	annual herb	May-Aug	2B.2	S1	G2G3
Potamogeton robbinsii	Robbins' pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	Jul-Aug	2B.3	S3	G5
Sidalcea covillei	Owens Valley checkerbloom	Malvaceae	perennial herb	Apr-Jun	1B.1	S2	G2
Sphenopholis obtusata	prairie wedge grass	Poaceae	perennial herb	Apr-Jul	2B.2	S2	G5
Streptanthus oliganthus	Masonic Mountain jewelflower	Brassicaceae	perennial herb	Jun-Jul	1B.2	S3	G3
Suaeda occidentalis	western seablite	Chenopodiaceae	annual herb	Jul-Sep	2B.3	S2	G5
Tetradymia tetrameres	dune horsebrush	Asteraceae	perennial shrub	(Jul)Aug	2B.2	S2	G4

Thelypodium integrifolium ssp. complanatum	foxtail thelypodium	Brassicaceae	annual / perennial herb	Jun-Oct	2B.2	S2	G5T4T5
Transberingia bursifolia ssp. virgata	virgate halimolobos	Brassicaceae	perennial herb	(Jun)Jul	2B.3	S2	G4T4
Viola pinetorum ssp. grisea	grey-leaved violet	Violaceae	perennial herb	Apr-Jul	1B.2	S3	G4G5T3

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Appendix D: BLM Species Lists

BLM Special Status Animal Species by Field Office

FIELD OFFICE		COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS	BLM STATUS	OTHER STATUS
Alturas		24 Species					
	Mammal						
		Long-eared myotis	Myotis evotis			BLMS	
		Pacific fisher	Martes pennanti (pacifica) DPS	FC	SC	BLMS	SSC
		Pallid bat	Antrozous pallidus			BLMS	SSC
		Small-footed myotis	Myotis ciliolabrum			BLMS	
		Townsend's big-eared bat	Corynorhinus townsendii			BLMS	SSC
		Western mastiff-bat	Eumops perotis californicus			BLMS	SSC
	Bird						
		Bald eagle	Haliaeetus leucocephalus	FD	SE	BLMS	EA
		Bank swallow	Riparia riparia		ST	BLMS	
		Burrowing owl	Athene cunicularia			BLMS	SSC
		Golden eagle	Aquila chrysaetos			BLMS	EA
		Greater sage-grouse	Centrocercus urophasianus	FC		BLMS	SSC
		Greater sandhill crane	Grus canadensis tabida		ST	BLMS	SF
		Northern goshawk	Accipiter gentilis			BLMS	SSC
		Swainson's hawk	Buteo swainsoni		ST	BLMS	
		Tricolored blackbird	Agelaius tricolor			BLMS	SSC
	Reptile						
		Northern sagebrush lizard	Sceloporus graciosus graciosus			BLMS	
	Amphibian						
		Oregon spotted frog	Rana pretiosa	FC		BLMS	
		Western spadefoot toad	Spea hammondii			BLMS	
	Fish						
		Lost River sucker	Deltistes luxatus	FE	SE		SF
		Modoc sucker	Catostomus microps	FE	SE		SF
		Pacific lamprey	Entosphenus tridentatus			BLMS	
		Rough sculpin	Cottus asperrimus		ST	BLMS	
		Shortnose sucker	Chasmistes brevirostris	FE	SE		SF
	Invertebrate						

Federal Status: FE = Federally Endangered, FT = Federally Threatened, FC = Federal Candidate, FP = Proposed for Federal Listing, FD = Delisted from Federal ESA; State Status: SE = State Endangered, ST = State Threatened, SC = State Candidate, SD = Delisted from State ESA; Other Status: EA = Bald and Golden Eagle Protection Act, SF = Fully Protected, SSC = Species of Special Concern

FIELD OFFICE		COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS	BLM STATUS	OTHER STATUS
Bishop		30 Species					
	Mammal						
		Desert bighorn sheep	Ovis canadensis nelsoni			BLMS	SF
		Fringed myotis	Myotis thysanodes			BLMS	
		Long-eared myotis	Myotis evotis			BLMS	
		Mohave ground squirrel	Spermophilus mohavensis		ST	BLMS	
		Owens Valley vole	Microtus californicus vallicola			BLMS	
		Pacific fisher	Martes pennanti (pacifica) DPS	FC	SC	BLMS	SSC
		Pallid bat	Antrozous pallidus			BLMS	SSC
		Pygmy rabbit	Brachylagus idahoensis			BLMS	
		Sierra Nevada bighorn sheep	Ovis canadensis sierrae	FE	SE		SF
		Small-footed myotis	Myotis ciliolabrum			BLMS	
		Spotted bat	Euderma maculatum			BLMS	SSC
		Townsend's big-eared bat	Corynorhinus townsendii			BLMS	SSC
		Yuma myotis	Myotis yumanensis			BLMS	
	Bird						
		Bald eagle	Haliaeetus leucocephalus	FD	SE	BLMS	EA
		Bank swallow	Riparia riparia		ST	BLMS	
		Burrowing owl	Athene cunicularia			BLMS	SSC
		Golden eagle	Aquila chrysaetos			BLMS	EA
		Greater sage-grouse	Centrocercus urophasianus	FC		BLMS	SSC
		Least Bell's vireo	Vireo bellii pusillus	FE	SE		
		Northern goshawk	Accipiter gentilis			BLMS	SSC
		Swainson's hawk	Buteo swainsoni		ST	BLMS	
		Western yellow-billed cuckoo	Coccyzus americanus occidentalis	FC	SE	BLMS	
	Reptile						
		Northern sagebrush lizard	Sceloporus graciosus graciosus			BLMS	
		Panamint alligator lizard	Elgaria panamintina			BLMS	
	Amphibian						
		Black toad	Anaxyrus exsul		ST	BLMS	SF
		Inyo Mountains slender salamander	Batrachoseps campi			BLMS	
	Fish						
		Amargosa River pupfish	Cyprinodon nevadensis amargosae			BLMS	

Federal Status: FE = Federally Endangered, FT = Federally Threatened, FC = Federal Candidate, FP = Proposed for Federal Listing, FD = Delisted from Federal ESA; State Status: SE = State Endangered, ST = State Threatened, SC = State Candidate, SD = Delisted from State ESA; Other Status: EA = Bald and Golden Eagle Protection Act, SF = Fully Protected, SSC = Species of Special Concern

FIELD OFFICE		COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS	BLM STATUS	OTHER STATUS
		Owens pupfish	Cyprinodon radiosus	FE	SE		SF
		Owens speckled dace	Rhinichthys osculus ssp. 2			BLMS	
		Owens tui chub	Siphateles bicolor snyderi	FE	SE		
Eagle Lake		20 Species					
	Mammal						
		Fringed myotis	Myotis thysanodes			BLMS	
		Long-eared myotis	Myotis evotis			BLMS	
		Pacific fisher	Martes pennanti (pacifica) DPS	FC	SC	BLMS	SSC
		Pallid bat	Antrozous pallidus			BLMS	SSC
		Pygmy rabbit	Brachylagus idahoensis			BLMS	
		Small-footed myotis	Myotis ciliolabrum			BLMS	
		Townsend's big-eared bat	Corynorhinus townsendii			BLMS	SSC
		Yuma myotis	Myotis yumanensis			BLMS	
	Bird						
		Bald eagle	Haliaeetus leucocephalus	FD	SE	BLMS	EA
		Bank swallow	Riparia riparia		ST	BLMS	
		Burrowing owl	Athene cunicularia			BLMS	SSC
		California spotted owl	Strix occidentalis occidentalis			BLMS	SSC
		Golden eagle	Aquila chrysaetos			BLMS	EA
		Greater sage-grouse	Centrocercus urophasianus	FC		BLMS	SSC
		Greater sandhill crane	Grus canadensis tabida		ST	BLMS	SF
		Northern goshawk	Accipiter gentilis			BLMS	SSC
		Swainson's hawk	Buteo swainsoni		ST	BLMS	
		Tricolored blackbird	Agelaius tricolor			BLMS	SSC
	Reptile						
		California mountain kingsnake	Lampropeltis zonata			BLMS	
		Northern sagebrush lizard	Sceloporus graciosus graciosus			BLMS	

Federal Status: FE = Federally Endangered, FT = Federally Threatened, FC = Federal Candidate, FP = Proposed for Federal Listing, FD = Delisted from Federal ESA; State Status: SE = State Endangered, ST = State Threatened, SC = State Candidate, SD = Delisted from State ESA; Other Status: EA = Bald and Golden Eagle Protection Act, SF = Fully Protected, SSC = Species of Special Concern

All BLM CALIFORNIA SPECIAL STATUS PLANTS

Thursday, May 28, 2015
11:00:38 AM

SCIENTIFIC NAME	COMMON NAME	TYPE OF PLANT	FAMILY	FED STATUS	CA STATUS	BLM STATUS	CA RARE PLANT RANK	NNPS STATUS	GLOBAL RANK	STATE RANK	NV STATUS	RECOVERY PLAN?	DATE UPDATED	COMMENTS	ALTURAS	ARCATA	BAKERSFIELD	BARSTOW	BISHOP	EAGLE LAKE	EL CENTRO	HOLLISTER	MOTHER LODE	NEEDLES	PALM SPRINGS	REDDING	RIDGECREST	SURPRISE	UKIAH
Abronia umbellata var. breviflora	pink sand-verbena	VASC	Nyctaginaceae			BLMS	1B.1		G4G5T2	S1		No	29-Apr-13	Formerly subsp. *breviflora* (Standl.) Munz.		K													
Abronia villosa var. aurita	chaparral sand-verbena	VASC	Nyctaginaceae			BLMS	1B.1		G5T3T4	S2		No	06-Aug-13	CNDDB occurrences 2 and 91 are on BLM lands in the Palm Springs Field Office.							S				K				
Acanthomintha ilicifolia	San Diego thornmint	VASC	Lamiaceae	FT	SE		1B.1		G1	S2		No	12-Mar-15	Status changed from "K" to "S" on 8/6/2013. Naomi Fraga was unable to find the species on BLM lands when trying to collect seeds in 2012. Although there are several CNDDB occurences close to BLM lands, none of these actually intersect with BLM lands.											S				
Acanthoscyphus parishii var. goodmaniana	Cushenberry oxytheca	VASC	Polygonaceae	FE			1B.1		G4?T1	S1		No	06-Aug-13	Formerly *Oxytheca parishii* var. *goodmaniana*. Name change based on Reveal, J.L. 2004. Nomenclatural summary of Polygonaceae subfamily Eriogonoideae. Harvard Papers in Botany 9(1):144. A draft Recovery Plan was issued in 1997 but as of 8/6/2013 was not final. Some of the recovery actions in the draft plan have been started and partially implemented.				K										
Acmispon argyraeus var. multicaulis	scrub lotus	VASC	Fabaceae			BLMS	1B.3		G4?T2	S2		No	13-Sep-12	Formerly *Lotus argyraeus* (Greene) Greene var. *multicaulis* (Ottley) Isely. Occurs on BLM lands in vicinity of Dinosaur Trackway ACEC. Occurrence there discovered in 2008 acc. Jim Weigand.										K				
Acmispon rubriflorus	red-flowered lotus	VASC	Fabaceae			BLMS	1B.1		G1	S1		No	16-Nov-10	Formerly *Lotus rubriflorus* H.K. Sharsm.												S			

SCIENTIFIC NAME	COMMON NAME	TYPE OF PLANT	FAMILY	FED STATUS	CA STATUS	BLM STATUS	CA RARE PLANT RANK	NNPS STATUS	GLOBAL RANK	STATE RANK	NV STATUS	RECOVERY PLAN?	DATE UPDATED	COMMENTS	ALTURAS	ARCATA	BAKERSFIELD	BARSTOW	BISHOP	EAGLE LAKE	EL CENTRO	HOLLISTER	MOTHER LODE	NEEDLES	PALM SPRINGS	REDDING	RIDGECREST	SURPRISE	UKIAH
Arctostaphylos rainbowensis	rainbow manzanita	VASC	Ericaceae			BLMS	1B.1		G2	S2		No	31-Mar-15	CNDDB Occurrence 43 is on BLM lands in Riverside County. Occurrence 56, is based on a 2005 collection by Woelfel and Woelfel, who claim it was collected on BLM lands in San Diego County, but CNDDB maps it as a 1/5 mile radius circle, some of which is BLM and some of which is private. Some other occurrences are close to but not on BLM lands.											K				
Arctostaphylos rudis	sand mesa manzanita	VASC	Ericaceae			BLMS	1B.2		G2	S2		No	31-Mar-15				K												
Aristocapsa insignis	Indian Valley spineflower	VASC	Polygonaceae			BLMS	1B.2		G2?	S2?		No	31-Mar-15				S												
Astragalus agnicidus	Humboldt milk-vetch	VASC	Fabaceae		SE	BLMS	1B.1		G3	S3		No	13-Sep-12			S													
Astragalus agrestis	field milk-vetch	VASC	Fabaceae			BLMS	2.B2		G5	S2?		No	31-Mar-15	This species is rather widespread elsewhere, so the primary value of this population is its disjunct location in CA, and maintaining the genetic viability of the species across its range.	K					K										
Astragalus albens	Cushenberry milk-vetch	VASC	Fabaceae	FE			1B.1		G1	S1		No	06-Aug-13	A draft Recovery Plan was issued in 1997 but as of 8/6/2013 was not final. Some of the recovery actions in the draft plan have been started and partially implemented.				K												
Astragalus anxius	Ash Valley milk-vetch	VASC	Fabaceae			BLMS	1B.3		G1	S1		No		In Ash Valley ACEC/RNA.	K														
Astragalus argophyllus var. argophyllus	silverleaf milk-vetch	VASC	Fabaceae			BLMS	2B.2		G5T4	S1		No	31-Mar-15						K	K									
Astragalus atratus var. mensanus	Darwin Mesa milk-vetch	VASC	Fabaceae			BLMS	1B.1		G4G5T1	S1		No	13-Sep-12	On Darwin Mesa.													K		
Astragalus bernardinus	San Bernardino Milk-Vetch	VASC	Fabaceae			BLMS	1B.2		G2G3	S2S3		No	06-Aug-13	Currently shown in Little San Bernardino Mountains, Little San Bernardino Mountains, New York Mountains, and Big Horn Mountains. There are 33 known occurrences in CNDDB, 12 between 1992 and 2011.				K						K					

SCIENTIFIC NAME	COMMON NAME	TYPE OF PLANT	FAMILY	FED STATUS	CA STATUS	BLM STATUS	CA RARE PLANT RANK	NNPS STATUS	GLOBAL RANK	STATE RANK	NV STATUS	RECOVERY PLAN?	DATE UPDATED	COMMENTS	ALTURAS	ARCATA	BAKERSFIELD	BARSTOW	BISHOP	EAGLE LAKE	EL CENTRO	HOLLISTER	MOTHER LODE	NEEDLES	PALM SPRINGS	REDDING	RIDGECREST	SURPRISE	UKIAH
Astragalus brauntonii	Braunton's milk-vetch	VASC	Fabaceae	FE			1B.1		G2	S2		Yes	13-Sep-12												S				
Astragalus cimae var. sufflatus	inflated Cima milk-vetch	VASC	Fabaceae			BLMS	1B.3		G3T3	S3		No	31-Mar-15	CNDDB Occurrence number 2 is on BLM lands within the new boundary of the Cerro Gordo/Conglomerate Mesa ACEC.													K		
Astragalus deanei	Deane's milk-vetch	VASC	Fabaceae			BLMS	1B.1		G1	S1		No	31-Mar-15												K				
Astragalus douglasii var. perstrictus	Jacumba milk-vetch	VASC	Fabaceae			BLMS	1B.2		G5T2?	S2?		No	31-Mar-15												K				
Astragalus ertterae	Walker Pass milk-vetch	VASC	Fabaceae			BLMS	1B.3		G2	S2		No					K										K		
Astragalus funereus	black milk-vetch	VASC	Fabaceae			BLMS	1B.2		G2	S2.2		No						K											
Astragalus hornii var. hornii	Horn's milk-vetch	VASC	Fabaceae			BLMS	1B.1		G4G5T2T3	S1		No	13-Sep-12				K												
Astragalus jaegerianus	Lane Mtn. milk-vetch	VASC	Fabaceae	FE			1B.1		G1	S1		No	13-Sep-12					K											
Astragalus johannis-howellii	Long Valley milkvetch	VASC	Fabaceae		SR	BLMS	1B.2		G2	S2		No	31-Mar-15						K										
Astragalus lemmonii	Lemmon's milk-vetch	VASC	Fabaceae			BLMS	1B.2	W	G2	S2		No	13-Sep-12							S									
Astragalus lentiformis	lens-pod milk-vetch	VASC	Fabaceae			BLMS	1B.2		G2	S2		No								K									
Astragalus lentiginosus var. coachellae	Coachella Valley milk-vetch	VASC	Fabaceae	FE			1B.2		G5T1	S1		No	31-Mar-15												K				
Astragalus lentiginosus var. piscinensis	Fish Slough milk-vetch	VASC	Fabaceae	FT			1B.1		G5T1	S1		Yes	13-Sep-12						K										
Astragalus magdalenae var. peirsonii	Peirson's milk-vetch	VASC	Fabaceae	FT	SE		1B.2		G3G4T2	S2		No	13-Sep-12								K								
Astragalus mojavensis var. hemigyrus	curved-pod milkvetch	VASC	Fabaceae			BLMS	1B.1		G3G4T2T3	S1		No	15-Nov-10	Formerly on List 1A. Rediscovered on Darwin Mesa by Dana York in 2001 and verified in 2009.													K		
Astragalus monoensis	Mono milk-vetch	VASC	Fabaceae		SR	BLMS	1B.2		G2	S2		No	31-Mar-15	Was *A. monoensis* var. *monoensis* until the former *A. m.* var. *ravenii* was elevated to its own species (*A. ravenii Barneby).*					K										

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Astragalus nyensis	Nye milk-vetch	VASC	Fabaceae			BLMS	1B.1		G3	S1		No	18-Sep-12	CNDDB mapped 19 specific occurrences of this species found during surveys for a private solar development project in 2011. Specific occurrence number 2 is mapped on BLM lands (occurrence rating poor, only 1 plant found). Although the records in RareFind for occurrences 9 and 13 state that those occurrences occupy both private and BLM lands, both occurrences are mapped only on private lands.				K												
Astragalus oocarpus	San Diego rattleweed	VASC	Fabaceae			BLMS	1B.2		G3	S3		No	31-Mar-15												K				
Astragalus oophorus var. lavinii	Lavin's milk-vetch	VASC	Fabaceae			BLMS	1B.2		G4T2	S1		No	15-Nov-10	Bodie Hills.					K										
Astragalus pachypus var. jaegeri	Jaeger's bush milk-vetch	VASC	Fabaceae			BLMS	1B.1		G4T1	S1		No	30-Jul-13	CNDDB Occurrence 43, in Riverside County, is nonspecific, mapped in a 1 mile radius circle that includes BLM, State, and private lands; it is based on old (1880 and 1881) collections. Nonspecific Occurrence 6, also in Riverside County, has some BLM lands mapped inside a 1 mile radius circle, but most lands in the circle are private.										S				
Astragalus pseudiodanthus	Tonopah milk-vetch	VASC	Fabaceae			BLMS	1B.2		G3Q	S2		No	31-Mar-15						K										
Astragalus pulsiferae var. pulsiferae	Pulsifer's milk-vetch	VASC	Fabaceae			BLMS	1B.2	W	G4T2	S2 in CA; S1 in NV		No								K									

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Balsamorhiza macrolepis	big-scale balsamroot	VASC	Asteraceae			BLMS	1B.2		G2	S2		No	13-Sep-12	Formerly *B. macrolepis* Sharp var. *macrolepis*. Jepson Manual 2nd edition submerges *B. m.* var. *platylepis* (Sharp) Ferris, which was the only variety, into *B. hookeri* Nutt. Documented in the Ukiah Field Office within the proposed right-of-way of the AltaGas/Greenwing Energy proposed Walker Ridge wind farm (Vollmar Consulting, 2010 Sensitive Botanical Resources Survey Report, Walker Ridge Project Site, Lake and Colusa Counties, California, October 2010).									K			K			K
Balsamorhiza sericea	silky balsamroot	VASC	Asteraceae			BLMS	1B.3		G4Q	S3		No	28-Apr-15												S			
Berberis harrisoniana	Kofa Mountain barberry	VASC	Berberidaceae			BLMS	1B.2		G1G2	S1		No	28-Apr-15	In Whipple Wash										K					
Berberis nevinii	Nevin's barberry	VASC	Berberidaceae	FE	SE		1B.1		G1	S1		No	13-Sep-12	Formerly *Mahonia nevinii* (Gray) Fedde											K				
Bloomeria clevelandii	San Diego goldenstar	VASC	Themidaceae			BLMS	1B.1		G2	S2		No	06-Aug-13	Formerly *Muilla clevelandii* (S. Watson) Hoover. See discussion at: http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=121293. CNDDB specific Occurrence 19 is on both BLM and private lands. Occurrence 41 appears to be partially on BLM lands as well. Status changed from "S" to "K" on 8/6/2013.											K				
Boechera bodiensis	Bodie Hills rock cress	VASC	Brassicaceae			BLMS	1B.3		G2	S2		No	15-Nov-10	Formerly *Arabis bodiensis* Roll.					K										
Boechera lincolnensis	Lincoln rock cress	VASC	Brassicaeae			BLMS	2B.3		G4?	S2		No	28-Apr-15	Formerly *Arabis pulchra* S. Watson var. *munciensis* M.E. Jones. On Darwin Mesa. Formerly known as Darwin rock cress.													K		
Boechera serpenticola	Serpentine Rockcress	VASC	Brassicaceae			BLMS	1B.2		G1	S1		No	13-Sep-12	CNDDB maps nonspecific areas immediately adjacent to BLM lands near summit of Bully Choop Mountain. North-facing slopes on serpentine talus.												S				

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Calochortus dunnii	Dunn's mariposa	VASC	Liliaceae		SR	BLMS	1B.2		G2?	S2?		No	28-Apr-15												K				
Calochortus excavatus	Inyo mariposa	VASC	Liliaceae			BLMS	1B.1		G2	S2		No	13-Sep-12						K										
Calochortus fimbriatus	late-flowered mariposa lily	VASC	Liliaceae			BLMS	1B.3		G3	S3		No	28-Apr-15	CNDDB Occurrence 41 on the Los Padres National Forest is within 800m of BLM lands in Ventura County. Added to the CNPS/CDFG lists as RPR 1B.3 on 10-26-2012.			S													
Calochortus greenei	Greene's mariposa	VASC	Liliaceae			BLMS	1B.2		G3	S3		No	13-Sep-12													K				
Calochortus longebarbatus var. longebarbatus	long-haired star-tulip	VASC	Liliaceae			BLMS	1B.2		G4T3	S3		No			S											S				
Calochortus monanthus	Shasta River mariposa	VASC	Liliaceae			BLMS	1A		GH	SH		No														S				
Calochortus obispoensis	San Luis mariposa lily	VASC	Liliaceae			BLMS	1B.2		G2	S2		No	28-Apr-15				S													
Calochortus palmeri var. palmeri	Palmer's mariposa lily	VASC	Liliaceae			BLMS	1B.2		G3T3?	s3?		No	28-Apr-15	CNDDB occurrence number 66 is located on Ridgecrest Field Office parcels. CNDDB occurrence 18 and 20 are located on scattered Bakersfield Field Office parcels.			K										K				
Calochortus persistens	Siskiyou mariposa lily	VASC	Liliaceae	FC	SR	BLMS	1B.2		G1	S1		No	28-Apr-15													S				
Calochortus raichei	The Cedars fairy-lantern	VASC	Liliaceae			BLMS	1B.2		G2	S2		No	23-Oct-12	CNDDB occurences 4 and 8 are definitely on BLM land at The Cedars; occurrence 7 is mapped as occurring partly on BLM land but RareFind account says it occurs on private land.																	K
Calochortus simulans	San Luis Obispo mariposa lily	VASC	Liliaceae			BLMS	1B.3		G2	S2		No	28-Apr-15				S													
Calochortus striatus	alkali mariposa lily	VASC	Liliaceae			BLMS	1B.2		G3	S3		No	28-Apr-15				K	S									K			
Calochortus westonii	Shirley Meadows star-tulip	VASC	Liliaceae			BLMS	1B.2		G2	S2		No	28-Apr-15				K													
Calycadenia hooveri	Hoover's calycadenia	VASC	Asteraceae			BLMS	1B.3		G3	S3		No	28-Apr-15				S													
Calycadenia micrantha	small-flowered calycadenia	VASC	Asteraceae			BLMS	1B.2		G2	S2		No	28-Apr-15																	S

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Cryptantha mariposae	Mariposa cryptantha	VASC	Boraginaceae			BLMS	1B.3		G3	S3		No	28-Apr-15	Two collections by Vern Yadon, one in Clear Creek at 3307 ft elevation and the other at Santa Rita Peak, just below east side. CNDDB doesn't yet show these occurrences (as of 6/27/2013) but this is because they didn't know about them at last update (pers. comm. Nick Jensen, May 2009). This is a significant range extension. The Yadon collections were still not mapped in CDDB as of 4/28/2015.								K	K						
Cryptantha roosiorum	bristlecone cryptantha	VASC	Boraginaceae		SR	BLMS	1B.2		G2	S2		No	18-Apr-13						S							K		
Cryptantha schoolcraftii	Schoolcraft's cryptantha	VASC	Boraginaceae			BLMS	2B.2	W	G3	S1 (CA); S3 (NV)		No	28-Apr-15	Common name "ash cryptantha" used in Jepson Manual 2nd edition. Nevada Heritage Program uses "Schoolcraft catseye."														K	
Cusickiella quadricostata	Bodie Hills cusickiella	VASC	Brassicaceae			BLMS	1B.2		G3	S2		No	28-Apr-15						K										
Cylindropuntia fosbergii	pink teddy-bear cholla	VASC	Cactaceae			BLMS	1B.3		G2	S2		No	18-Sep-12	Treated as a hybrid, *C. xfosbergii* in the Jepson Manual, Second Edition, but based on a recent paper by Mayer et al. (*Madrono* 58: 106-112), CDFG and CNPS have elevated to specific level and assigned a California Rare Plant Rank of 1.3 (on 5-7-2012). Several occurrencs on BLM lands in the Monument Peak Quadrangle.							K									
Cylindropuntia munzii	Munz cholla	VASC	Cactaceae			BLMS	1B.3		G3	S1		No	18-Apr-13	Formerly *Opuntia munzii* C.B. Wolf.							K				K				
Cymopterus deserticola	desert cymopterus	VASC	Apiaceae			BLMS	1B.2		G2	S2		No	13-Sep-12	East of Cuddeback Lake and north of Edwards AFB.				K									K		
Cymopterus ripleyi var. saniculoides	Ripley's cymopterus	VASC	Apiaceae			BLMS	1B.2		G3G4T3Q	S1		No	18-Apr-13	NE Haiwee Reservoir.													K		
Cypripedium fasciculatum	clustered lady's slipper	VASC	Orchidaceae			BLMS	4.2		G4	S4		No	28-Apr-15													K			
Cypripedium montanum	mountain lady's slipper	VASC	Orchidaceae			BLMS	4.2		G4	S4		No	28-Apr-15													K			

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Dalea ornata	ornate dalea	VASC	Fabaceae			BLMS	2B.1		G4G5	S2		No	28-Apr-15	Only six closely associated occurrences are known of this plant in CA, and they are disjunct from the others in western NV. Known from the Snake and Columbia valleys in E. WA, OR, and SW ID. Occurrences in CA are grazed and subject to invasion form medusahead and cheatgrass.						K										
Dedeckera eurekensis	July gold	VASC	Polygonaceae		SR	BLMS	1B.3		G3	S3		No	28-Apr-15						K								K		
Deinandra arida	Red Rock tarplant	VASC	Asteraceae			BLMS	1B.2		G1	S1		No	18-Apr-13	Formerly *Hemizonia arida* Keck. Known to occur in Red Rock State Park.													S		
Deinandra conjugens	Otay tarplant	VASC	Asteraceae	FT	SE		1B.1		G1	S1		Yes	13-Sep-12	Formerly *Hemizonia conjugens* Keck. Review of CNDDB does not show any occurences on BLM land, though some are close.											S				
Deinandra floribunda	Tecate tarplant	VASC	Asteraceae			BLMS	1B.2		G2	S2		No	28-Apr-15	Formerly *Hemizonia floribunda* A. Gray.											K				
Deinandra halliana	Hall's tarplant	VASC	Asteraceae			BLMS	1B.1		G2	S2		No	13-Sep-12	Formerly *Hemizonia halliana* Keck.			S					K							
Deinandra increscens subsp. villosa	Gaviota tarplant	VASC	Asteraceae	FE	SE		1B.1		G4G5T2	S2		No	13-Sep-12	Formerly *Hemizonia increscens* Keck subsp. *villosa* Tanowitz. Proposed Critical Habitat, mineral estate.			S												
Deinandra minthornii	Santa Suzana tarplant	VASC	Asteraceae		SR	BLMS	1B.2		G2	S2		No	28-Apr-15	Formerly *Hemizonia minthornii* Jeps.											S				

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Erigeron aequifolius	Hall's daisy	VASC	Asteraceae			BLMS	1B.3		G3	S3		No	28-Apr-15	S. Sierra.													K		
Erigeron blochmaniae	Blochman's leafy daisy	VASC	Asteraceae			BLMS	1B.2		G2	S2		No	28-Apr-15				K												
Erigeron calvus	bald daisy	VASC	Asteraceae			BLMS	1B.1		G1Q	S1		No	18-Apr-13	This occurrence is based on a single collection by Olmstead in 1891. It is mapped as a best guess "just north of Swansea," and has a 1-mile radius circle to indicate a nonspecific occurrence. Most of the lands within that circle are BLM lands, so we should at least have the species on our list as suspected to occur. Although the Rarefind report states that there are taxonomic questions (and the Global Natureserve rank of G1Q also indicates this), the species is included in both Jepson Manual 2 and the Flora of North America.					S										
Erigeron multiceps	Kern River daisy	VASC	Asteraceae			BLMS	1B.2		G2	S2		No	28-Apr-15				S												
Erigeron parishii	Parish's daisy	VASC	Asteraceae	FT			1B.1		G2	S2		No	06-Aug-13	A draft Recovery Plan was issued in 1997 but as of 8/6/2013 was not final. Some of the recovery actions in the draft plan have been started and partially implemented. Until 8/6/2013 this was considered "K" in the Palm Springs Field Office, but a review of CNDDB records shows that although there are many occurrences within the boundaries of the Palm Springs Field Office, none of these are near BLM lands.				K										
Erigeron serpentinus	serpentine daisy	VASC	Asteraceae			BLMS	1B.3		G2	S2		No	23-Oct-12	CNDDB Occurrence 3 is on BLM land at The Cedars.																K
Erigeron supplex	supple daisy	VASC	Asteraceae			BLMS	1B.2		G2	S2		No	17-Mar-15	Old records from the Garcia River just east of the Stornetta Unit, according to Jim Weigand (2/3/2015).																S

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Erigeron uncialis var. uncialis	limestone daisy	VASC	Asteraceae			BLMS	1B.2		G3G4T2	S2		No	31-Mar-15	On private land within the new boundary of the Cerro Gordo/Conglomerate Mesa ACEC													S		
Eriodictyon altissimum	Indian Knob mountainbalm	VASC	Boraginaceae	FE	SE		1B.1		G1	S1		Yes	13-Sep-12				S												
Eriogonum alexanderae	Alexander's buckwheat	VASC	Polygonaceae			BLMS	1B.1		G2G3	S1		No	07-Jul-12	Name changed from *Eriogonum ochrocephalum* var. *alexanderae* to *Eriogonum alexanderae* and rare plant rank changed from Rank 2.2 to 1B.1 on 11/29/2011. Located in Mono County on Bodie Mountain. Likely on BLM lands there.					S										
Eriogonum apricum var. apricum	Ione buckwheat	VASC	Polygonaceae	FE	SE		1B.1		G1T1	S1		No	13-Sep-12										K						
Eriogonum bifurcatum	forked buckwheat	VASC	Polygonaceae			BLMS	1B.2		G3	S3		No	18-Apr-13					K											
Eriogonum cedrorum	The Cedars buckwheat	VASC	Polygonaceae			BLMS	1B.3		G1	S1		No	23-Oct-12	Specific CNDDB Occurrence 1 is mapped on BLM land at The Cedars.															K
Eriogonum contiguum	Reveal's buckwheat	VASC	Polygonaceae			BLMS	2B.3		G2	S2		No	28-Apr-15	CNDDB Occurrences 14, 15, and 18 are on BLM lands.													K		
Eriogonum crosbyae	Crosby's buckwheat	VASC	Polygonaceae			BLMS		W	G3	S3		No		S3 in NV. This plant is threatened by gold mining activity on the Nevada portion of the Surprise Field Office. 82% of this plants' total numbers are within the mining claim area. A few populations also occur in Oregon.														K	
Eriogonum eremicola	Wildrose Canyon buckwheat	VASC	Polygonaceae			BLMS	1B.3		G1	S1		No	13-Sep-12						S							K		
Eriogonum hoffmannii var. hoffmannii	Hoffmann's buckwheat	VASC	Polygonaceae			BLMS	1B.3		G3T2	S2		No	28-Apr-15	Panamint Mts.; Found in Surprise Canyon on BLM lands--see 2005 ADEIS.													K		
Eriogonum kelloggii	Red Mountain buckwheat	VASC	Polygonaceae		SE	BLMS	1B.2		G2	S2		No	28-Apr-15	Formerly a Federal candidate for listing. Removed from candidate list, Federal Register 29: 56029, September 18, 2014.		K													
Eriogonum kennedyi var. pinicola	Kern buckwheat	VASC	Polygonaceae			BLMS	1B.1		G4T1	S1		No	18-Apr-13				S										K		

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Eriogonum mensicola	Pinyon Mesa buckwheat	VASC	Polygonaceae			BLMS	1B.3		G2G3	S2		No	31-Mar-15	CNDDB occurrences 6 and 8 on BLM, perhaps within the boundary of the new Cerro Gordo/Conglomerate Mesa ACEC (the occurrences straddle the boundary). Other occurrences on Death Valley NP, China Lake NWS.													K		
Eriogonum microthecum var. panamintense	Panamint Mountains buckwheat	VASC	Polygonaceae			BLMS	1B.3		G5T3	S3		No	28-Apr-15	CNDDB occurrence number 7 is within the boundary of the new Cerro Gordo/Conglomerate Mesa ACEC. Other occurrences on BLM lands in the Ridgecrest and Bishop Field Offices.					K								K		
Eriogonum microthecum var. schoolcraftii	Schoolcraft's wild buckwheat	VASC	Polygonaceae			BLMS	1B.2	W	G5T3 in CA; G5T2 in NV	S3 (CA); S1 (NV)		No	28-Apr-15	Taxon described by: Reveal, J. L. 2004. New entities in *Eriogonum* (Polygonaceae: Eriogonoideae). Phytologia 86(3):121-159.						K								S	
Eriogonum nervulosum	Snow Mtn. buckwheat	VASC	Polygonaceae			BLMS	1B.2		G2	S2		No	13-Sep-12																K
Eriogonum nudum var. murinum	mouse buckwheat	VASC	Polygonaceae			BLMS	1B.2		G5T2	S2		No	28-Apr-15				K					K							
Eriogonum ovalifolium var. vineum	Cushenberry buckwheat	VASC	Polygonaceae	FE			1B.1		G5T1	S1		No	06-Aug-13	A draft Recovery Plan was issued in 1997 but as of 8/6/2013 was not final. Some of the recovery actions in the draft plan have been started and partially implemented.				K											
Eriogonum prociduum	prostrate buckwheat	VASC	Polygonaceae			BLMS	1B.2	W	G3	S3 (CA); S1 (NV)		No	28-Apr-15	Found in the Ash Valley RNA/ACEC.	K													K	
Eriogonum temblorense	Temblor buckwheat	VASC	Polygonaceae			BLMS	1B.2		G2	S2.2		No		Known only from eastern Monterey Co., eastern San Luis Obispo Co., and western Kern Co. Within the Bakersfield Field Office it occurs on shaly/barren soils in the Temblor Range and Elkhorn Plain. This habitat type appears to by very scattered and limited.			K												
Eriogonum thornei	Thorne's buckwheat	VASC	Polygonaceae		SE	BLMS	1B.2		G1	S1		No	13-Sep-12	Formerly *E. ericifolium* var. *thornei*, now elevated to species.										K					

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Helianthus niveus subsp. tephrodes	Algodones Dunes sunflower	VASC	Asteraceae		SE	BLMS	1B.2		G4T2T3	S2		No	28-Apr-15								K									
Helianthus winteri	Winter's sunflower	VASC	Asteraceae			BLMS	1B.2		G1G2	S1S2		No	20-Jan-15	First described by Stebbins, J.C., C.J. Winchell, and J.V.H. Constable. 2013. Helianthus winteri (Asteraceae), a new perennial species from the southern Sierra Nevada foothills, California. Aliso 31: 19-24. Added to CDFW/CNPS list on 10/15/2014. Occurrence Number 2 (80m accuracy) is within 200m of isolated BLM 40-acre parcel centered at approximately -119.253672 36.592978 Decimal Degrees (NAD 83, UTM Zone 11N)			K													
Hesperevax sparsiflora subsp. brevifolia	short-leaved evax	VASC	Asteraceae			BLMS	1B.2		G4T2T3	S2S3		No	17-Mar-15	On BLM at Mattole Beach (in great numbers acc. Jennifer Wheeler) and at Samoa.		K														K
Hesperidanthus jaegeri	Jaeger's hesperidanthus	VASC	Brassicaceae			BLMS	1B.2		G2	S2		No	31-Mar-15	Formerly *Caulostramina jaegeri* . CNDDB Occurrence number 4 is definitely on BLM lands within the boundary of the new Cerro Gordo/Congolmerate Mesa ACEC. Occurrence number 2 is likely on BLM lands with the ACEC. Occurrence number 6, Keynot Peak near head of Keynot Canyon is on BLM lands but not clear whether in the Bishop or Ridgecrest Field Office (occurrence as mapped straddles the border between the two field offices).					S									K		
Hesperidanthus jaegeri	Jaeger's hesperidanthus	VASC	Brassicaceae			BLMS	1B.2		G2	S2		No	03-Jun-13	Formerly *Caulostramina jaegeri* (Roll.) Roll.					S							K		

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Horkelia tenuiloba	thin-lobed horkelia	VASC	Rosaceae			BLMS	1B.2		G2	S2		No	28-Apr-15	Suspected to occur on BLM lands on and near Willis Ridge, acc. Jennifer Wheeler.		S													
Hosackia crassifolia var. otayensis	Otay Mountain lotus	VASC	Fabaceae			BLMS	1B.1		G5T1	S1		No	06-Aug-13	CNDDB occurrences 1, 2, and 3 are all on BLM lands on Otay Mountain.											K				
Hulsea californica	San Diego sunflower	VASC	Asteraceae			BLMS	1B.3		G2	S2		No	28-Apr-15	CNDDB occurrences 2 and 24 are located on BLM lands in the El Centro Field Office portion of San Diego County. Occurrences 10, 14, 22, 23, 26 are non-specific CNDDB occurrences that are located next to BLM lands in the El Centro Field Office part of San Diego County. Nonspecific Occurrence 29 in the Palm Springs Field Office portion of San Diego County has some BLM lands within the mapped 1-mile radius circle.							K				S				
Hydropus marginellus	'little brown mushroom'	FUNG	Tricholomataceae			BLMS			G3	S1S2		No	16-Nov-10			K													
Iris hartwegii subsp. columbiana	Tuolumne iris	VASC	Iridaceae			BLMS	1B.2		G4T1	S2		No	28-Apr-15										K						
Iris munzii	Munz's iris	VASC	Iridaceae			BLMS	1B.3		G2	S2		No	28-Apr-15				S												
Ivesia aperta var. aperta	Sierra Valley ivesia	VASC	Rosaceae			BLMS	1B.2	T	G2T2	S2 (CA); S1 (NV)		No	28-Apr-15							K									
Ivesia jaegeri	Jaeger's ivesia	VASC	Rosaceae			BLMS	1B.3		G2G3	S1		No	03-Jun-13											K					
Ivesia kingii var. kingii	alkali ivesia	VASC	Rosaceae			BLMS	2B.2		G4T3Q	S2		No	19-Aug-09	Moved from CNPS 1B.2 to 2.2 on 11/23/08 because more common in NV.					K										
Ivesia longibracteata	Castle Crags ivesia	VASC	Rosaceae			BLMS	1B.3		G1	S1		No	03-Jun-13													S			
Ivesia paniculata	Ash Creek ivesia	VASC	Rosaceae			BLMS	1B.2		G2	S2		No	03-Jun-13	Found in the Ash Valley RNA/ACEC.	K														
Ivesia patellifera	Kingston Mtns. ivesia	VASC	Rosaceae			BLMS	1B.3		G1	S2		No	03-Jun-13					K						K					
Ivesia pickeringii	Pickering's ivesia	VASC	Rosaceae			BLMS	1B.2		G2	S2.2		No													S				

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Loeflingia squarrosa var. artemisiarum	Sagebrush loeflingia	VASC	Caryophyllaceae			BLMS	2B.2		G5T2T3	S2		No	28-Apr-15	Known to CA from only Lassen County (6 occ), Inyo County (5 occ), and two occurrences from Kern and Los Angeles counties. Three occurrences are on BLM lands within the Eagle Lake Field Office, 3 on private, and disjunct. Threatened by livestock trampling.					K	K								S	
Lomatium congdonii	Congdon's lomatium	VASC	Apiaceae			BLMS	1B.2		G2	S2		No	28-Apr-15	On BLM lands in the Red Hills, Tuolumne County.									K						
Lomatium roseanum	adobe lomatium	VASC	Apiaceae			BLMS	1B.2	W	G2G3	S2 (CA); S2 (NV)		No	03-Jun-13	Mike Dolan found ca. 500 plants on Likely Tablelands, in low sage infested with medusahead. Lat: 41.271339 degrees N, Long: -120.493347 degrees W; above and to south of Romero Creek, 4,640', clay loam soil.	K													S	
Lomatium shevockii	Owens Peak lomatium	VASC	Apiaceae			BLMS	1B.3		G2	S2		No	03-Jun-13				K										K		
Lupinus citrinus var. citrinus	orange lupine	VASC	Fabaceae			BLMS	1B.2		G2T2	S2		No	28-Apr-15				S												
Lupinus citrinus var. deflexus	Mariposa lupine	VASC	Fabaceae		ST	BLMS	1B.2		G2T1	S1		No	13-Sep-12	Previously shown as S in the Hollister Field Office, a holdover from the time that Hollister managed BLM lands in Mariposa County. Removed as S from Hollister and put as S in the Mother Lode Field Office. There are occurrences within 550 m from isolated BLM lands in T6S,R 19E, S6, MDM.									S						
Lupinus duranii	Mono Lake lupine	VASC	Fabaceae			BLMS	1B.2		G2	S2		No	28-Apr-15						K										
Lupinus excubitus var. medius	Mountain Springs bush lupine	VASC	Fabaceae			BLMS	1B.3		G4T2T3	S2		No									K				K				
Lupinus ludovicianus	San Luis Obispo County lupine	VASC	Fabaceae			BLMS	1B.2		G1	S1		No	28-Apr-15				S												

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Lupinus magnificus var. hesperius	McGee Meadows lupine	VASC	Fabaceae			BLMS	1B.3		G3T2Q	S2		No	28-Apr-15	Jepson Manual 2nd edition, equivocal about whether to recognize this variety, states: "If recognized taxonomically, straight-keeled pls from SNE assignable to *Lupinus magnificus* var. *hesperius* (A. Heller) C.P. Sm., McGee Meadows lupine." After review, CNPS and CNDDB kept as 1B.3 by decision dated Feb. 8, 2012. Occurs on Mt. Tom.					K											
Lupinus magnificus var. magnificus	Panamint Mtns. lupine	VASC	Fabaceae			BLMS	1B.2		G3T2Q	S2		No	03-Jun-13						S								K		
Lupinus sericatus	Cobb Mountain lupine	VASC	Fabaceae			BLMS	1B.2		G2	S2		No	28-Apr-15	Walker Ridge/Bear Creek, Sulphur Creek sub-watershed (Source: Jim Weigand).																K
Lupinus spectabilis	shaggyhair lupine	VASC	Fabaceae			BLMS	1B.2		G2	S2		No	28-Apr-15										K						
Lupinus uncialis	lilliput lupine	VASC	Fabaceae			BLMS	2B.2		G4	S2		No	28-Apr-15	Five occurrences known in Alturas Field Office. Twenty total occurences in CA, most on private lands, and some converted to homesites. Disjunct in CA. CA occurrences important for maintaining genetic viability of the species. Threats include grazing.	K														
Madia radiata	showy golden madia	VASC	Asteraceae			BLMS	1B.1		G2	S2		No					S					K							
Malacothamnus aboriginum	Indian Valley bush mallow	VASC	Malvaceae			BLMS	1B.2		G2	S2		No	13-Sep-12									K							
Malacothamnus hallii	Hall's bush-mallow	VASC	Malvaceae			BLMS	1B.2		G2Q	S2		No	18-Sep-12	CNDDB Occurrence 38, population found on BLM lands on 6/2011.																K
Malacothamnus palmeri var. involucratus	Carmel Valley bush-mallow	VASC	Malvaceae			BLMS	1B.2		G3T3Q	S3		No	28-Apr-15									K							
Malacothamnus palmeri var. lucianus	Arroyo Seco bush-mallow	VASC	Malvaceae			BLMS	1B.2		G3T1Q	S1		No	28-Apr-15									K							
Malacothrix saxatilis var. arachnoidea	Carmel Valley malacothrix	VASC	Asteraceae			BLMS	1B.2		G5T2	S2		No	28-Apr-15									S							

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Menodora spinescens var. mohavensis	Mojave menodora	VASC	Oleaceae			BLMS	1B.2		G4T2T3	S2S3		No	18-Sep-12	CNDDB mapped occurrences on BLM lands. One, Occurrence 10, on BLM lands slated for renewable energy.				K											
Mentzelia inyoensis	Inyo blazing star	VASC	Loasaceae			BLMS	1B.3	W	G3	S3		No	28-Apr-15	According to Anne Halford we have occurrences in Fish Slough and Travertine Hot Springs, and there's a very large population on the Inyo National Forest near Black Point (Mono Lake).					K										
Mentzelia polita	polished blazing star	VASC	Loasaceae			BLMS	1B.2		G2	S2		No	03-Jun-13	CNDDB maps one nonspecific occurrence on BLM land just north of the Eastern Mojave National Preserve on the Clark Mountain quad. CNPS Rare Plant Treasure Hunt found a new occurrence (CNDDB Occurrence No. 3) on the Ivanpah Lake quad.										K					
Mentzelia tridentata	creamy blazing star	VASC	Loasaceae			BLMS	1B.3		G3	S3		No	28-Apr-15	E. of Cuddeback Lake.													S		
Microseris paludosa	marsh microseris	VASC	Asteraceae			BLMS	1B.2		G2	S2		No	17-Mar-15	Known form the Stornetta Unit, per the following collection: CAS514442, 1968.															K
Mimulus evanescens	ephemeral monkeyflower	VASC	Phrymaceae			BLMS	1B.2		G3	S2		No	28-Apr-15		K					S						S			
Mimulus filicaulis	slender-stemmed monkeyflower	VASC	Phrymaceae			BLMS	1B.2		G2	S2		No	28-Apr-15										K						
Mimulus gracilipes	slender-stalked monkerflower	VASC	Phrymaceae			BLMS	1B.2		G2G3	S2S3		No	16-Nov-10				S												
Mimulus mohavensis	Mojave monkeyflower	VASC	Phrymaceae			BLMS	1B.2		G2	S2		No	13-Sep-12					K											
Mimulus norrisii	Kaweah monkeyflower	VASC	Phrymaceae			BLMS	1B.3		G2	S2		No	28-Apr-15				K												
Mimulus pictus	Calico monkeyflower	VASC	Phrymaceae			BLMS	1B.2		G2	S2		No	28-Apr-15				K												
Mimulus pulchellus	pansy monkeyflower	VASC	Phrymaceae			BLMS	1B.2		G2G3	S2S3		No	13-Sep-12										K						
Mimulus shevockii	Kelso Creek monkeyflower	VASC	Phrymaceae			BLMS	1B.2		G2	S2		No	13-Sep-12				K										K		
Minuartia howellii	Howell's sandwort	VASC	Caryophyllaceae			BLMS	1B.3		G4	S2		No	13-Sep-12													S			
Minuartia stolonifera	Scott Mtn. sandwort	VASC	Caryophyllaceae			BLMS	1B.3		G2	S2		No	03-Jun-13													S			

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Pentachaeta exilis subsp. aeolica	slender pentachaeta	VASC	Asteraceae			BLMS	1B.2		G5T1	S1		No	13-Sep-12									K							
Perityle inyoensis	Inyo rock daisy	VASC	Asteraceae			BLMS	1B.2		G2	S2		No	28-Apr-15	Occurrences 1 and 8 are entirely within the boundary of the new Cerro Gordo/Conglomerate Mesa ACEC. Occurrence 5 is partially within the ACEC, with the remainder on BLM land outside it.					S									K		
Perityle villosa	Hanaupah rock daisy	VASC	Asteraceae			BLMS	1B.3		G2	S2		No	03-Jun-13	Inyo Mts.													K		
Petalonyx thurberi subsp. gilmanii	Death Valley sandpaper-plant	VASC	Loasaceae			BLMS	1B.3		G5T2	S2		No						K									K		
Phacelia cookei	Cooke's phacelia	VASC	Boraginaceae			BLMS	1B.1		G1	S1		No	16-Nov-10													S			
Phacelia greenei	Scott Valley phacelia	VASC	Boraginaceae			BLMS	1B.2		G2	S2		No	16-Nov-10													K			
Phacelia inundata	playa phacelia	VASC	Boraginaceae			BLMS	1B.3	W	G2	S2 (CA); S2? (NV)		No	28-Apr-15		S					K								S	
Phacelia inyoensis	Inyo phacelia	VASC	Boraginaceae			BLMS	1B.2		G2	S2		No	13-Sep-12	Fish Slough and Alabama Hills.					K										
Phacelia leonis	Siskiyou phacelia	VASC	Boraginaceae			BLMS	1B.3		G3	S3		No	28-Apr-15													S			
Phacelia monoensis	Mono County phacelia	VASC	Boraginaceae			BLMS	1B.1	T	G3	S2		No	28-Apr-15						K										
Phacelia mustelina	Death Valley round-leaved phacelia	VASC	Boraginaceae			BLMS	1B.3		G2	S2		No	03-Jun-13	Saline Valley.													K		
Phacelia nashiana	Charlotte's phacelia	VASC	Boraginaceae			BLMS	1B.2		G3	S3		No	13-Sep-12				K										K		
Phacelia novenmillensis	Nine Mile Canyon phacelia	VASC	Boraginaceae			BLMS	1B.2		G3	S3		No	16-Nov-10				K										K		
Phacelia parishii	Parish's phacelia	VASC	Boraginaceae			BLMS	1B.1		G2G3	S1		No	03-Jun-13	The only known population on BLM lands in Southern California is within and immediately adjacent to a military maneuvering training area. This species was at one time considered extirpated in CA, but was rediscovered in 1989.				K											

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Phacelia phacelioides	Mount Diablo phacelia	VASC	Boraginaceae			BLMS	1B.2		G1	S1		No	03-Jun-13	Known but very uncommon within ACEC of Clear Creek Management Area acc 2009 Draft CCMA RMP/EIS. Six records from CCMA in Cal Flora 2009.								K								
Phaeocollybia californica	California phaeocollybia	FUNG	Cortinariaceae			BLMS			G3	None		No	28-Apr-15			K										S			
Phaeocollybia olivacea	olive phaeocollybia	FUNG	Cortinariaceae			BLMS			G3	None		No	16-Nov-10			K										S			
Phaeocollybia piceae	'spruce phaeocollybia'	FUNG	Cortinariaceae			BLMS			G3?	None		No	16-Nov-10			K													
Phaeocollybia pseudofestiva	no common name	FUNG	Cortinariaceae			BLMS			G3	None		No	16-Nov-10			S													
Phaeocollybia scatesiae	no common name	FUNG	Cortinariaceae			BLMS			G3?	None		No	16-Nov-10			K													
Phaeocollybia spadicea	spadicea phaecollybia	FUNG	Cortinariaceae			BLMS			G3G4	None		No	16-Nov-10			K										S			
Phlox hirsuta	Yreka phlox	VASC	Polemoniaceae	FE	SE		1B.2		G1	S1		Yes													S			
Pholisma sonorae	sand food	VASC	Boraginaceae			BLMS	1B.2		G2	S2		No	13-Sep-12	Formerly included in the family Lennoaceae.							K								
Piperia candida	white-flowered rein orchid	VASC	Orchidaceae			BLMS	1B.2		G3?	S2		No	03-Jun-13	May be on public lands on Red Mt. Jennifer to check--will leave as suspected for now.		S													
Piperia yadonii	Yadon's rein orchid	VASC	Orchciaceae	FE			1B.1		G2	S2		Yes	13-Sep-12									K							
Plagiobothrys uncinatus	hooked popcorn-flower	VASC	Boraginaceae			BLMS	1B.2		G2	S2		No	03-Jun-13				S												
Pleuropogon hooverianus	Hoover's semaphore grass	VASC	Poaceae		ST	BLMS	1B.1		G2	S2		No	13-Sep-12			S													
Poa diaboli	Diablo Canyon blue grass	VASC	Poaceae			BLMS	1B.2		G2	S2		No	28-Apr-15	May be on BLM lands in Ruda Canyon, San Luis Obispo Co.			S													
Polyctenium williamsiae	Williams's combleaf	VASC	Brassicaceae			BLMS	1B.2	T	G2Q	S1 (CA); S2 (NV)	CE	No	03-Jun-13	Known in Bishop on BLM land in the Bodie area. Because the Jepson Manual 2nd Edition and the Flora of North America reduced this species to synonomy under P. fremontii, the species was recently reviewed and kept on List 1B.2 by CNPS and CNDDB by decision dated February 8, 2012.	S				K	S									

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Senecio clevelandii var. heterophyllus	Red Hills ragwort	VASC	Asteraceae			BLMS	1B.2		G4?T2Q	S2?		Yes	03-Jun-13	*Senecio clevelandii* is now *Packera clevelandii*, but the combination *Packera clevelandii* var. *heterophylla* has not been validly published. This variety has been reduced to synonymy in the Jepson Manual 1st and 2nd editions. The treatment by Barkley in Jepson Manual 1 was not based on genetic work. Barkley's treatment has been continued by Trock in Jepson Manual 2 and Flora North America. CDFW, CNPS, and BLM will continue to recognize the variety until genetic work conclusively shows that vars. *clevelandii* and *heterophyllus* are actually the same taxon.									K							
Sidalcea covillei	Owens Valley checkerbloom	VASC	Malvaceae		SE	BLMS	1B.1		G2	S2		No	28-Apr-15						K										
Sidalcea hickmanii subsp. anomala	Cuesta Pass checkerbloom	VASC	Malvaceae		SR	BLMS	1B.2		G3T1	S1		No	13-Sep-12				S					S							
Sidalcea hickmanii subsp. parishii	Parish's checkerbloom	VASC	Malvaceae		SR	BLMS	1B.2		G3T1	S1		No	03-Jun-13	This species used to be a Federal candidate but was removed from the candidate list in 2006.											S				
Sidalcea keckii	Keck's checkerbloom	VASC	Malvaceae	FE			1B.1		G1	S1		No	13-Sep-12				K												
Sidalcea malviflora subsp. patula	Siskiyou checkerbloom	VASC	Malvaceae			BLMS	1B.2		G5T2	S2		No	13-Sep-12			S													
Sidalcea oregana subsp. eximia	coast checkerbloom	VASC	Malvaceae			BLMS	1B.2		G5T1	S1		No				S													
Sidalcea robusta	Butte County checkerbloom	VASC	Malvaceae			BLMS	1B.2		G2	S2		No	13-Sep-12												K				
Silene campanulata subsp. campanulata	Red Mountain catchfly	VASC	Caryophyllaceae		SE	BLMS	4.2		G5T3Q	S3		No	28-Apr-15	Known from Red Mountain, Mendocino Co., Arcata FO; suspected on public lands in Ukiah FO from an occurrence near public lands in the Gilmore Peak 24k quad, Colusa Co.		K														S

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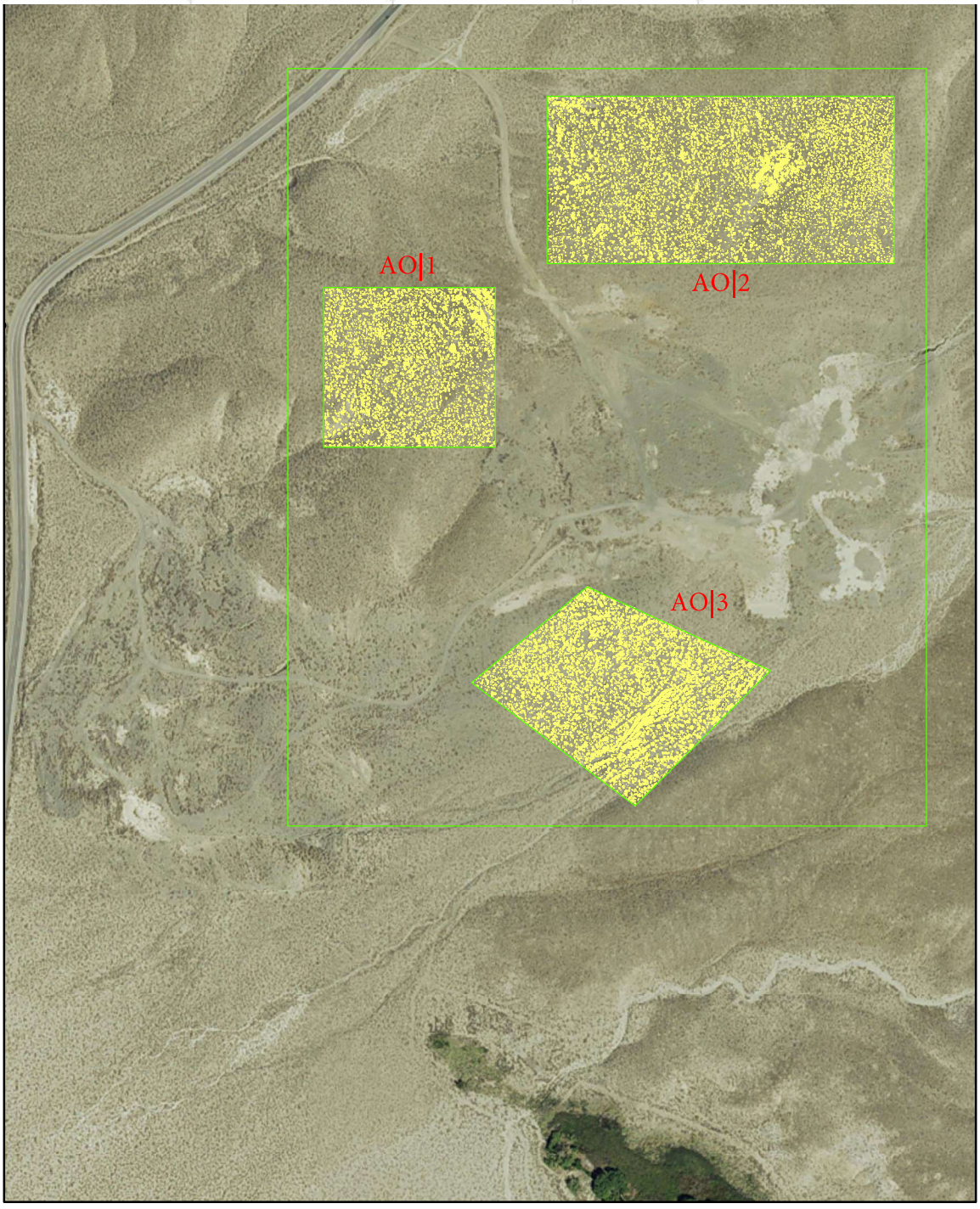
Streptanthus campestris	southern jewel-flower	VASC	Brassicaceae			BLMS	1B.3		G3	S3		No	28-Apr-15	Nonspecific CNDDB Occurrence 8, in the El Centro FO, is on lands slated for renewable energy; there are BLM lands within the mapped 1 mile radius circle, but there are also private lands. Occurrence 1, in the Palm Springs FO, contains BLM lands within the mapped 1 mile radius circle, but most of the lands within the circle are private.							S				S				
Streptanthus cordatus var. piutensis	Piute Mountains jewel-flower	VASC	Brassicaceae			BLMS	1B.2		G5T1	S1		No	03-Jun-13				K										K		
Streptanthus glandulosus subsp. hoffmannii	Hoffmann's jewel-flower	VASC	Brassicaceae			BLMS	1B.3		G4TH	SH		No	16-Nov-10	Elevated from *S. g.* var. *hoffmannii* Kruckeberg to subsp. *hoffmannii* in Jepson Manual 2nd edition.																S
Streptanthus morrisonii subsp. elatus	Three Peaks jewel-flower	VASC	Brassicaceae			BLMS	1B.2		G2T2	S2		No	28-Apr-15	Reduced to synonymy under *S. morrisonii* in Jepson Manual 2nd edition.																K
Streptanthus morrisonii subsp. hirtiflorus	Dorr's Cabin jewel-flower	VASC	Brassicaceae			BLMS	1B.2		G2T1	S1		No	28-Apr-15	Reduced to synonymy under *S. morrisonii* in Jepson Manual 2nd edition.																S
Streptanthus morrisonii subsp. kruckebergii	Kruckeberg's jewel-flower	VASC	Brassicaceae			BLMS	1B.2		G2T1	S1		No	03-Jun-13	Reduced to synonymy under *S. morrisonii* in Jepson Manual 2nd edition.																K
Streptanthus morrisonii subsp. morrisonii	Morrison's jewel-flower	VASC	Brassicaceae			BLMS	1B.2		G2T2	S2		No	28-Apr-15	The Jepson Manual 2nd edition does not recognize any subspecific taxa under *S. morrisonii*.																K
Streptanthus oliganthus	Masonic Mountain jewel-flower	VASC	Brassicaceae			BLMS	1B.2	W	G2G3	S2		No	28-Apr-15						K											
Streptanthus vernalis	early jewel-flower	VASC	Brassicaceae			BLMS	1B.2		G1	S1		No	24-Aug-09	Known from only one occurrence on serpentine at Three Peaks.																K
Stylocline citroleum	oil neststraw	VASC	Asteraceae			BLMS	1B.1		G2	S2		No	18-Sep-12	After reviewing CNDDB, specific occurrence 18 has BLM lands within the mapped circle.			K													
Stylocline masonii	Mason neststraw	VASC	Asteraceae			BLMS	1B.1		G1	S1		No	03-Jun-13				S													

Zurich Material Site Vegetation Coverage

Vegetation Analysis	
sUAS System:	senseFly eBee Plus Small Unmanned Aerial System with 20 MP S.O.D.A. Camera
Date of Photography:	November 8, 2017
Flight Altitude:	354' AMT

Vegetation Cover Analysis

Site	Square Feet		Percent of Veg. Cover	Confidence (Based on Stereo Assessment
	Planimetric Area	Vegetation Cover 0.2' or higher		
Full Area	3,040,000	767,549	25.25%	75%
AOI1	172,000	40,282	23.42%	95%
AOI2	365,400	74,120	20.28%	95%
AOI3	208,050	67,405	32.40%	95%



State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r a n d u m

Making Conservation a California Way of Life.

To: RYAN SPAULDING
Associate Environmental Planner
District 9 Capital Environmental Branch

Date: September 22, 2020

File: 09-INY-168
PM 21.6
EA 09-37320
EFIS 0917000072
Zurich Material Site

From: JULIE SAGE
PQS – Co-Principal Investigator Prehistoric Archaeology
District 9 Capital Environmental Branch

Subject: **CEQA Cultural Compliance—Screened Undertaking** for Zurich Material Site, State Route 168, Inyo County.

The California Department of Transportation (Caltrans) District 9 is proposing to re-establish a former material site for mining of shale near Big Pine, California. A new Highway Easement Deed will be needed from the Bureau of Land Management (BLM Bishop Field Office) for approximately 55.5 acres. Of those 55.5 acres, disturbance caused by mining operations will be limited to approximately 13.9 acres. Approximately 336,000 cubic yards of material will be extracted from the site over a minimum 50-year lifespan.

The material site will be mined in two separate phases. For the first phase, the existing surface of the pit will be excavated to a depth of up to 10 feet. The first phase will also involve the reestablishment of a previously rehabilitated access road, construction of check dams (n=4) and diversion channels (n=2), and the installation of an access gate and earthen berm road block. The second phase of mining will see the pit surface further excavated to a maximum depth of up to 38 feet. The pit will be graded to ensure internal drainage. Topsoil (approximately 4 to 6 inches in depth) will be relocated to soil berms on the outer perimeter of the pit for post mining reclamation purposes.

Upon completion of the extraction of all material to the final grade lines, the final slopes will be reclaimed as depicted in Layout Sheet L-2 in accordance with SMARA regulations. Topsoil berms will be removed and spread evenly on all slopes.

It is Caltrans' intent to rescind this site back to the BLM after mining resources are exhausted and slopes are reclaimed. Upon final site configuration and revegetation, a final SMARA reclamation inspection will be performed to retire the associated mine ID and commence with the intended end-use (natural resources – open space designation). At this point, no further mining activities will occur at the site.

It is anticipated that Inyo County will be the lead agency for CEQA on this project and will require Caltrans to provide Biological and Archeological studies to complete their action. Though there is no Federal funding on the "project," there will be a Federal Action by FHWA for the map application package to acquire a Federal Lands Highway Easement Deed and a letter of concurrence from BLM. Therefore, it is anticipated that FHWA will be the NEPA lead agency for the "project."

Maximum depth of excavation will be 38 feet. Some vegetation removal will also occur. All staging will occur inside of the material site. The proposed project is State-only funded.

The purpose of this project is to to provide quality material for District maintenance forces for use in highway maintenance work throughout northern Inyo County and southern Mono County. The shale at the pit is the ideal material for shoulder backing and other material intensive maintenance activities. The development of this site for mining will complete the strategic plan for establishing material sources within reasonable haul proximity.

This review is intended to ensure that this undertaking is carried out in a manner consistent with Caltrans's regulatory responsibilities under **Section 106 of the National Historic Preservation Act (36 CFR Part 800)** and pursuant to the **January 2014 *First Amended Programmatic Agreement*** *among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA).

Caltrans District 9 Archaeologist, Julie Sage, conducted a review of cultural sensitivity for the proposed project. The review included an examination of the Environmental Study Request (ESR) and KMZ map file submitted by Ryan Spaulding, Project Coordinator, on February 10, 2020. Past project files, District 9 cultural files, the Caltrans Cultural Resources Database (CCRD), the CCRD geographic information system (GIS) database, and the findings of the *Cultural Resources Inventory of Caltrans District 9 Rural Conventional Highways in Inyo, Kern, Mono, and Northern San Bernardino Counties* (Leach-Palm et al. 2010) and the *Transportation Enhancement Activities Project: Archaeological Roadside Inventory for Caltrans District 9, Inyo and Mono Counties, California* (Richman and Basgall 1997) were also examined. The results of the background research revealed that no previous investigations have been performed along this route within the current proposed project area.

On July 13, 2020, Greg Haverstock, BLM archaeologist, conducted a review of cultural sensitivity for the proposed project (Haverstock 2020). According to Mr. Haverstock, a record search found no previously recorded resources within the proposed project area. There was also no record of previous archaeological survey being conducted at the quarry location or access route. It is likely that the previous use of the quarry pre-dated the National Historic Preservation Act (NHPA), and any archaeologist working in the BLM Bishop Field Office.

On August 6, 2020, a Class III pedestrian survey of the entire APE which had not been subjected to prior ground alteration was conducted by Greg Haverstock, BLM archaeologist (Haverstock 2020). This included a portion of the area within the proposed material pit boundary, but outside the original pit footprint. Since the original pit pre-dates modern Cultural Resource Management, the survey area included the edges of the previous disturbances including the decommissioned access route. Survey markers

remaining from the original quarry activity were relocated and used to delineate the survey effort. No sites were located within the survey area. However, one isolated milling basin and hand-stone were identified on the edge of the APE. These items were documented, but are not at risk, so they were left in situ.

Based on this review, the project, as currently proposed, has **no potential to affect historic properties or historical resources** eligible for or listed in the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR). The work conforms to the following "classes of screened undertakings" listed in the Section 106 PA, Attachment 2:

- Class 10 – Repair of the highway and its facilities.
- Class 27 – Right-of-Way activities such as hardship acquisition or acquisition of scenic or conservation easements.
- Class 28 – Joint or multiple use permits with other agencies or encroachment permits.

As a result, this proposed project is exempt from further review—no additional archaeological studies are required at this time, and the Section 106 and CEQA cultural resources components are complete.

Please note that this assessment could change if new information regarding cultural resources becomes available, if there are any changes to the proposed activities, or if additional locations are added. If there are any such changes to the proposed project, additional review by the cultural resources unit will be required. If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find.

No additional archaeological or built resources studies are required at this time. If you have any questions, please do not hesitate to contact Julie Sage at (760) 872-0798 or email at julie.sage@dot.ca.gov.

Attachments: Project location and plans

References

Haverstock, Greg
2020 *Cultural Resources Inventory Report*. Zurich Material Site. Survey/Project number CA-170-20-42. Bureau of Land Management, Bishop Field Office. Submitted to the California Department of Transportation (Caltrans) District 9, Bishop. EA 09-37320, EFIS 0917000072.

Leach-Palm, Laura
2010 *Cultural Resources Inventory of Caltrans District 9 Rural Conventional Highways in Inyo, Kern, Mono, and Northern San Bernardino Counties*. Prepared by Far

Western Anthropological Research Group, Inc. Submitted to Caltrans, District 9, Bishop.

Richman, J.R. and M.E. Basgall
1997 *Transportation Enhancement Activities Project: Archaeological Roadside Inventory for Caltrans District 9, Inyo and Mono Counties, California*. Prepared by Archaeological Research Center, California State University, Sacramento. Submitted to Caltrans, District 9, Bishop.

CULTURAL RESOURCES INVENTORY REPORT

U.S. Department of the Interior
Bureau of Land Management
Bishop Field Office

SURVEY/PROJECT NO: CA-170-20-42

1. **PROJECT NAME & CASE NO:** Zurich Material Quarry Re-opening

2. **DEVELOPMENT COMPANY:** Caltrans, CA State Highway Transportation Agency

3. **REPORT DATE:** 8/7/2020

4. **DATE(S) OF SURVEY:** 8/6/2020

5. **COUNTY:** Inyo

6. **FIELDWORK LOCATION:** The proposed undertaking is located approximately 300 meters southeast of state highway 168, on an existing dirt route approximately 1.6 miles east of the Owens River. The location is delineated on the 7.5 USGS topographic map as a quarry pit.

   MAP: USGS 7.5 Quads: Uhlmeyer Springs

   LEGAL DESCRIPTION: Township 9 South, Range 39 East, Section 3

7. **PROJECT DESCRIPTION:** The proposed action involves the re-opening and use of a materials pit and access route. The pit is located on federal land managed by the Bureau of Land Management. The site is currently a closed and partially rehabilitated quarry that was previously used by Caltrans for highway construction and maintenance. The quarry is proposed to be re-opened. This includes re-establishing the access route off Highway 168, north of the material pit and providing a Right-of-Way to Caltrans. It was assumed that the entire footprint would be disturbed during the life of the quarry.

8. **PROJECT AREA DESCRIPTION:** The proposed project is constrained to an existing quarry and access route that were in use decades ago. The proposed access route is currently blocked-off and is being revegetated slowly. This route and the western portion of the quarry exhibit signs of having been paved in asphalt. Currently, sparse desert scrub vegetation is growing on rocky alluvial soils. Several eroded washes cut through the extant quarry. These have flooded in the recent past. The location is being used by the public for an unauthorized shooting area. Many appliances and other household refuse have been dumped and subsequently, shot within the project area. The northern and eastern margins contain a 40-meter strip of undisturbed surface. The western edge has approximately 25 meters of undisturbed surface. The southern edge of the quarry appears to lack material, so it is unlikely to be disturbed. There was no survey marker on this side, but the amount of undisturbed quarry appears to be near 30 meters. The access road is completely disturbed having been graded and paved at some point in the past.

9. **DESCRIPTION OF EXAMINATION PROCEDURES:** A records search found no previously recorded resources within the proposed project area. There was also no record of previous archaeological survey being conducted at the quarry location or access route. It is likely that the previous use of the quarry pre-dated the National Historic Preservation Act, and any archaeologist working in the Bishop Field Office.

   Current Survey: Following the search of the Bishop Field Office cultural resource files and geodatabase, a complete survey of the proposed project footprint was conducted. The survey targeted all portions of the ROW that appeared to be reasonably un-altered. This focused efforts on the margins of the quarry and access route, although three transects were randomly walked through the disturbed area to ensure no archaeological material was extant. The undisturbed surface area within the APE was surveyed using 15-meter transects. Ground visibility was good.

10. **INVENTORY TYPES:** A Class III, Pedestrian survey of the entire APE which had not been subjected to prior ground alteration was conducted. This included a portion of the area within the proposed material pit boundary, but outside the original pit footprint. Since the original pit pre-dates modern Cultural Resource Management, the survey area included the edges of the previous disturbances including the decommissioned access route. Survey markers remaining from the original quarry activity were relocated and used to delineate the survey effort.

11. **LEGALLY UNDEFINABLE ACRES SURVEYED:**

12. **NUMBER OF SITES FOUND:** No sites were located within the survey area; one isolated milling basin and hand-stone were identified on the edge of the APE. These items were documented, but are not at risk, so they were left in situ.

13. **COLLECTION:** None

14. **DESCRIPTION OF FINDINGS:** No resources meeting the definition of an archaeological site were located during pedestrian survey. As noted above, a set of isolated milling implements was located just outside of the APE. The proposed project is heavily disturbed.

15. **ACTUAL/POTENTIAL NATIONAL REGISTER PROPERTIES AFFECTED:** None

16. **LITERATURE SEARCH, BY WHOM/WHERE/DATE:** A records search of the Bishop Field Office cultural resources geodatabase failed to identify any previously recorded resources within the area of potential effect (APE) for the proposed undertaking. There was no record of prior archaeological survey within the APE. The records search was conducted by the field office archaeologist on 7/13/2020.

17. **CONCLUSION/RECOMMENDATIONS:** The proposed undertaking will not result in any effect to historic properties since none are extant within the proposed project area; therefore, ***No Effect*** determination has been rendered.

FIELD SUPERVISOR/PRINCIPAL INVESTIGATOR:

_____

Greg Haverstock
BLM Archaeologist
Bishop Field Office

Memorandum

Making Conservation a California Way of Life

To: MATTHEW GOIKE, P.E.
Office Chief, Engineering Branch C
Caltrans District 9

Date: 03/15/2021

EA#: 09-37320

From: BRADLEY BOWERS
Environmental Engineering Geologist
Program Manager
Caltrans District 9

Subject: **AIR/NOISE/HAZARDOUS WASTE/WATER/PALEONTOLOGY CLEARANCE MEMO – ZURICH MATERIAL SITE**

All scoping analyses, estimates, and risk assessments in this memo were performed based on information provided by the project engineer in the Environmental Study Request approved on 2/10/2020. All studies and analyses were performed in regard to all applicable CA State and Federal laws as well as Caltrans' internal policies. Any changes to the project limits, scope, description of work, or budget could affect the conclusions in this memo; any such changes must be accompanied by an updated Environmental Study Request and this memo should be revisited for accuracy.

Project Location and Description
Caltrans is proposing to establish the Zurich Material Site (MS 308) for mining shale near Big Pine, CA. The site is located in Inyo County near State Route 168, postmile 21.60; east of the town of Big Pine. The surrounding area is a mixture of land owned/controlled by the Bureau of Land Management and the Los Angeles Department of Water and Power.

The project area was previously a working material site that has ceased operation and has been reclaimed. A new highway easement deed would be needed from the Bureau of Land Management (BLM) for approximately 55.5 acres to develop and use the site. The disturbance area for material mining is expected to be approximately 13.9 acres. Within these ~14 acres, approximately 336,000 cubic yards of material are expected to be extracted from the site over its 50-year lifespan. Material from the site would be used by Caltrans District 9 maintenance forces for local highway maintenance work. Development of local sources of aggregate materials is outlined in District 9's Strategic Plan for establishing material sources within reasonable haul proximity to reduce costs and greenhouse gas emissions.

The material site would be mined in two phases. The first phase involves excavating the surface of the pit area to an average depth of 10 feet, rehabilitate the access road from highway 178, install an access gate, and create Earthen berms surrounding the material site. The second phase would extend excavation within the pit area to a maximum depth of 38 feet with gradual internal slopes to ensure internal drainage and containment of all material site run off. Approximately 4 rock check dams and two diversion channels would be created to prevent outside water from draining into the pit. The proposed site is located on an alluvial fan upslope from the Owens Valley floor, therefore groundwater is not expected to be encountered at maximum excavated depth.

Upon completion of both phases (end of extraction), all final slopes will be reclaimed in accordance with SMARA regulations. Topsoil berms will be removed and spread evenly across slopes. After the site has been reclaimed and inspected, control of the land would pass back to BLM.

This project is being funded with State monies however it is anticipated that Inyo County will be CEQA lead and Caltrans will be NEPA lead per their NEPA Assignment responsibilities. As such, the following studies are intended to satisfy both State and Federal environmental clearance responsibilities.

Figure 1 - Project map provided in Environmental Study Request

Air Resources

Analysis

The proposed material site is located within the jurisdiction of the Great Basin Regional Air Quality Control Board. The project vicinity is in compliance for all State and Federal criteria pollutants except for Federal PM10 and State ozone and PM10 (Tables 1 and 2, below). Using the EPA AirData online mapper, the proposed project limits lie outside of the nonattainment area for federal PM10 (Owens Valley) and are therefore the project area is within PM10 attainment. Attainment status for PM10 was confirmed with Caltrans Headquarters Air Quality Conformity staff via email on 11/12/2020. As requested in the Environmental Study Request, NEPA documentation was also prepared and a federal air quality conformity checklist has been submitted. As the project area is within an attainment area for all federal criteria pollutants, it is exempt from air conformity and hot spot analyses. There is no potential to encounter naturally occurring asbestos as the prerequisite ultramafic rock formations are not known to be present in or near the project area.

Inyo County

Table 1 - Federal Area Designations for Criteria Pollutants and National Ambient Air Quality Standards (NAAQS) Status for Inyo County, CA. California Air Resources Board; https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations

Pollutant	**Project Area Status**
Carbon Monoxide	Unclassified/Attainment
Lead	Unclassified/Attainment
Nitrogen Dioxide	Unclassified/Attainment
Ozone (8-hour)	Unclassified/Attainment
Sulfur Dioxide	Unclassified/Attainment
PM10	**Nonattainment (Owens Valley and Mono Basin). Project area - Attainment**
PM2.5	Unclassified/Attainment

Table 2 - CA State Designations for Criteria Pollutants and Status for Inyo County, CA. CA Air Resources Board; https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations

Pollutant	**Project Area Status**
Carbon Monoxide	Attainment
Hydrogen Sulfide	Attainment
Lead	Attainment
Nitrogen Dioxide	Attainment
Ozone	**Nonattainment**
Sulfur Dioxide	Attainment
PM10	**Nonattainment**
PM2.5	Attainment
Visibility Reducing Particles	Unclassified

Potential Impacts and AMMs

The scope of work described in the Environmental Study Request and Draft MS 308 Operations Plan do not include activities which would lead to sources of air pollutants which would cause any state or federal criteria pollutant currently in attainment to be reclassified as nonattainment. Material mining activities will be sporadic, contained within a depressed pit (after Phase 1) and all standard Caltrans dust control specifications will be implemented on the project.

Noise

Analysis

The proposed project is not a Type 1 Project pursuant to 23 CFR 772 and therefore is exempt from noise abatement consideration. The project setting is rural, with no residential or commercial receptors nearby. Construction/mining activities except for check dams, road rehabilitation, gate installation and berm creation during Phase 1 will be contained within a depressed pit which should aid in containing equipment noise to the project vicinity.

Potential Impacts and AMMs

Due to the lack of nearby receptors and containment of the majority of activities within a depressed area, there is a low likelihood of equipment noise to result in impacts. No measures required other than standard Caltrans noise control measures.

Hazardous Waste

Analysis

A search of the CA Water Board GeoTracker database was performed on 11/9/2020 and revealed no previous hazardous waste generators or remediation sites in or near the proposed material site.

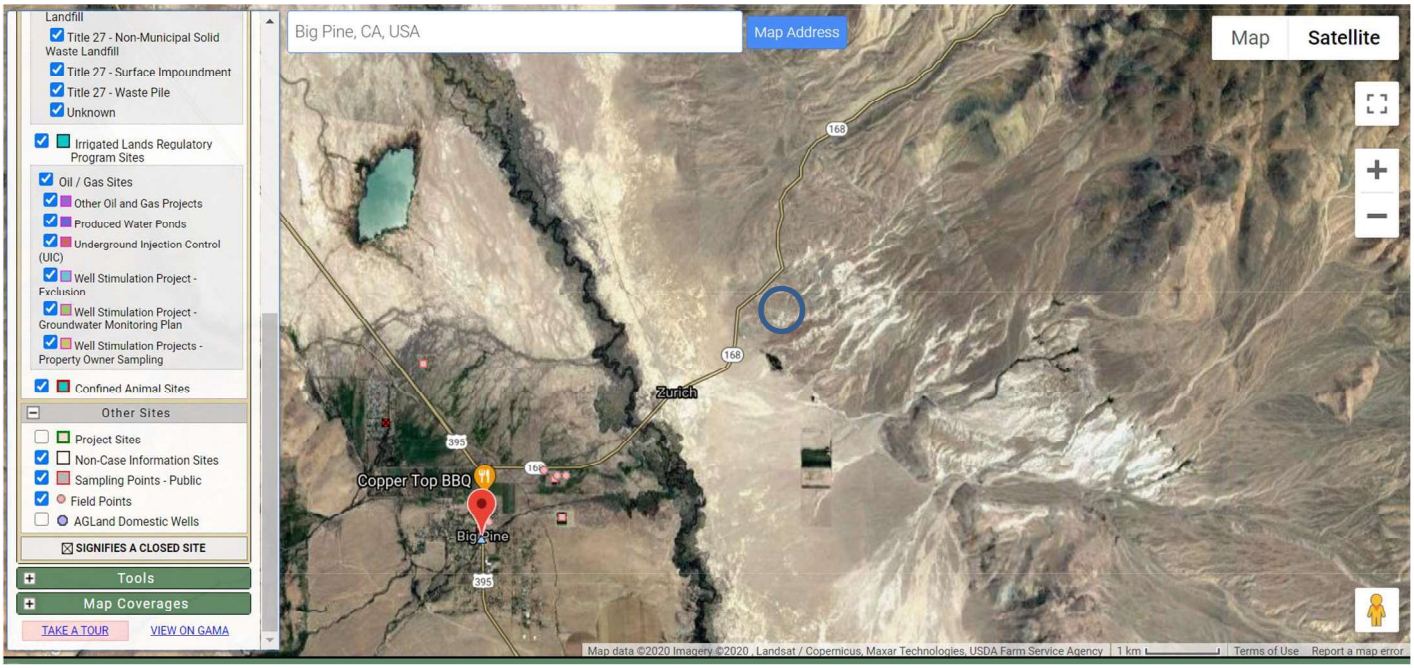


Figure 2 - Screenshot of GeoTracker search performed 11/9/2020. Approximate project location shown with blue oval.

The primary use of the site will be for Caltrans standard maintenance and operations work, including material mining, sorting and stockpiling for use in routine and emergency road maintenance activities on the State Highway System. Equipment most likely to be used in the pit include graders, loaders, dozers, and sorting grizzly structures. Only reusable imported natural materials such as dirt and rocks collected from Caltrans construction activities will be stored at the site. There was no mention of fuel storage tanks or any other hazardous material storage included in the MS 308 Operations Plan, and therefore assumed no hazardous materials will be stored at the material site at any time. Naturally occurring asbestos (NOA) is not expected to be encountered at this location as the geologic setting does not include ultra-mafic rocks which typically house NOA. As the site is located off of the State highway system, it is highly unlikely that aerially deposited lead has contaminated soil and no ADL testing is recommended at this time.

Potential Impacts and AMMs

No previously identified generators of hazardous wastes occur within the project limits. No hazardous waste materials are anticipated to be used or disposed of during operation of the material site. The project scope did not include the installation of equipment fueling facilities within the material site and thus it is not anticipated. All work after initial site development during Phase 1 will occur within the containment of the depressed central pit. This would serve to contain any errant spills or accidental distribution of materials. The project scope did not include any storage of hazardous materials within the pit. No further studies or measures other than standard stormwater BMPs are recommended at this time.

Water Resources

Analysis

All appropriate best management practices (BMPs) shall be used as outlined in the NPDES Statewide Storm Water Permit. Culvert inlets susceptible to sedimentation contamination, will be protected and standard job site management protections will be installed. No work is being done in the stream channel and does not require Clean Water Act Section 401/404 or dredge and fill permits. Due to the life span of the mine, the following measures will be taken in the event of a 50 year storm: rock armor lined spillways, retention basin, and a bench cut with a shallow channel along the side to help flow access water to the retention basin and not puddle in the mine floor.

Potential Impacts and AMMs

Stormwater BMPs will be implemented on project to prevent erosion and sediment transport.

Paleontology

Analysis

The project area lies along the western flank of the White Inyo Mountains, east of the Owens Valley on the western boundary of the Basin and Range Geomorphic Province. Geologic mapping of the area indicates the material site will extend into the Waucobi Lakebed formation, which has been studied extensively for the paleoclimatic history of the Owens Valley. The postmile segment of SR 168 is identified as low sensitivity in the Caltrans Paleo Sensitivity GIS Database. Multiple exposures of the Waucobi Lake fm are known to occur at the surface near the proposed the material site and elsewhere in the surrounding area. Multiple research papers and graduate theses have been written about this formation, often including geochemical analyses of lakebed and volcanic sediments and the study of fossilized ostracods to infer past climatic conditions during the Late Pliocene – Early Pleistocene period. According to the Caltrans tripartite system for determining fossil significance and impact risk, vertebrate fossils are considered much more significant than invertebrates, however outstanding invertebrate fossil beds or those with a high degree of scientific significance could be considered significant. The project information provided for this project indicate an impact area for mining activities of approximately 14 acres and 30 feet deep. The mining activities may encounter Waucobi Lakebed fm sediments, however the majority of known surface exposures of the formation occur south and southeast of the proposed project location (Figure 3). The material site currently has Quaternary alluvium at the surface, however the Waucobi fm could occur at depth and potentially could be encountered during mining operations.

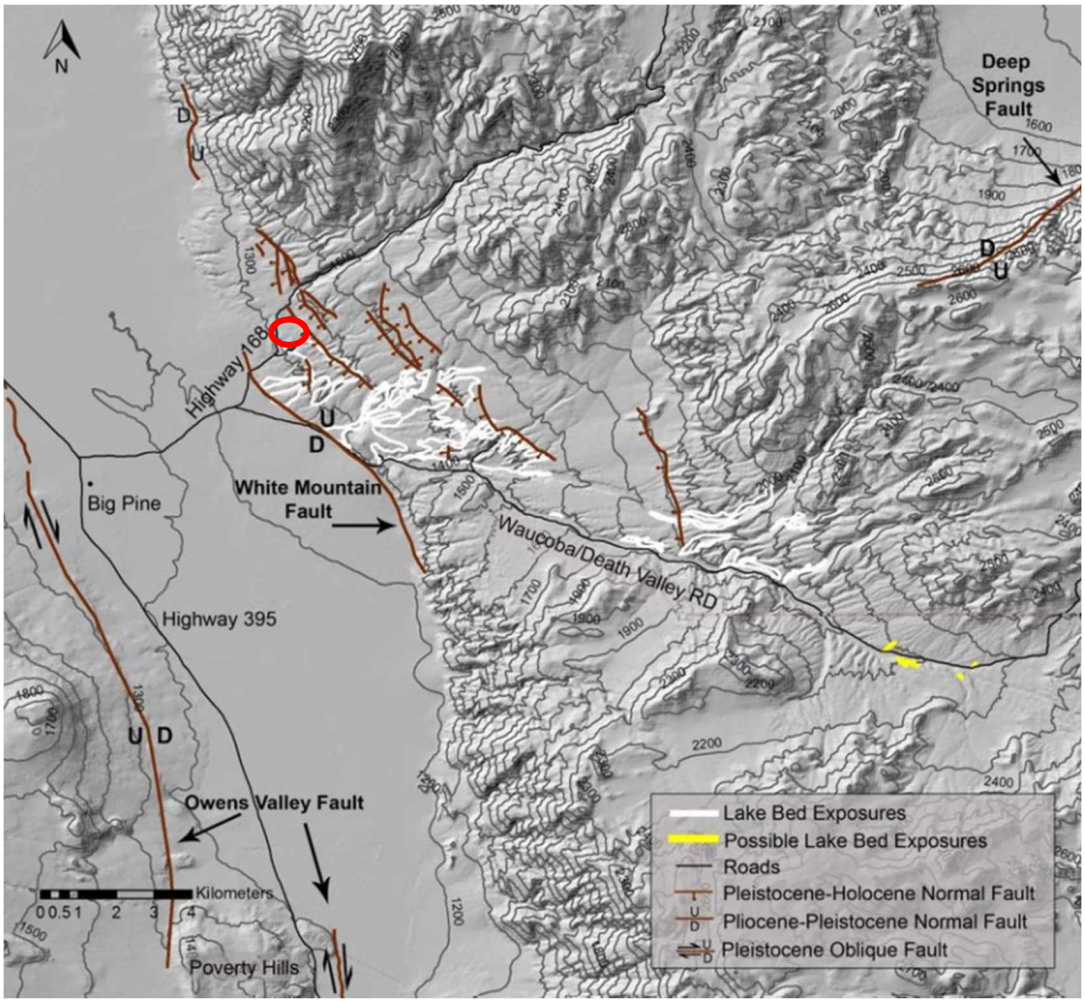


Figure 3 - Map of Waucobi Lakebed fm exposures and faults near project area. Source De Masi 2013. Approximate project area shown in red oval.

Potential Impacts and AMMs

Due to the limited area of work which could encounter the Waucobi Lakebed fm, the well-studied nature of the formation, and the small proportion of known occurrences of the formation lying within the impact area of the project, the project is determined to have a low potential for impacts on paleontological resources. The formation is known to contain ostracod and other invertebrate fossils which have been studied to analyze paleoclimatic conditions, however the immediate project area is not likely to contain fossil resources considered outstanding or especially scientifically significant due to the abundance of previous research, the availability of access locations to other portions of the same formation for future studies, and the relative abundance of invertebrate fossils found throughout the formation at multiple exposures well outside of the proposed material site. Due to the small and relatively unrecognizable nature of invertebrate fossils in this formation, standard avoidance measures such as awareness training would be largely fruitless for construction staff operating material site machinery. Standard Caltrans specifications for immediate notification of the District Paleontologist if staff encounter fossils during construction will be implemented on the project.

Questionnaire to Determine Visual Impact Assessment (VIA) Level

Use the following questions and subsequent score as a guide to help determine the appropriate level of VIA documentation. This questionnaire assists the VIA preparer (i.e. Landscape Architect) in estimating the probable visual impacts of a proposed project on the environment and in understanding the degree and breadth of the possible visual issues. The goal is to develop a suitable document strategy that is thorough, concise and defensible.

Enter the project name and consider each of the ten questions below. Select the response that most closely applies to the proposed project and corresponding number on the right side of the table. Points are automatically computed at the bottom of the table and the total score should be matched to one of the five groups of scores at the end of the questionnaire that include recommended levels of VIA study and associated annotated outlines (i.e., minor, moderate, advanced/complex).

This scoring system should be used as a preliminary guide and should not be used as a substitute for objective analysis on the part of the preparer. Although the total score may recommend a certain level of VIA document, circumstances associated with any one of the ten question-areas may indicate the need to elevate the VIA to a greater level of detail. For projects done by others on the State Highway System, the District Landscape Architect should be consulted when scoping the VIA level and provide concurrence on the level of analysis used.

The Standard Environmental Reference, Environmental Handbook, Volume I: Chapter 27-Visual & Aesthetics Review lists preparer qualifications for conducting the visual impact assessment process. Landscape Architects receive formal training in the area of visual resource management and can appropriately determine which VIA level is appropriate.

Preparer Qualifications:

"Scenic Resource Evaluations and VIA's are performed under the direction of licensed Landscape Architects. Landscape Architects receive formal training in the area of visual resource management with a curriculum that emphasizes environmental design, human factors, and context sensitive solutions. When recommending specific visual mitigation measures, Landscape Architects can appropriately weigh the benefits of these different measures and consider construction feasibility and maintainability."

Calculate VIA Level Score

Project Information

Project Name

Zurich Materials Site

Project Identification #

09-373200/0917000072

Preparer Name

Jim Hibbert

Caltrans District Landscape Architect (DLA)

For projects on State Highway System Only, Name of Caltrans District Landscape Architect (DLA) providing VIA Questionnaire Score Concurrence - if different than above.

N/A

Change to Visual Environment

1. **Will the project result in a noticeable change in the physical characteristics of the existing environment?**

Consider all project components and construction impacts - both permanent and temporary, including landform changes, structures, noise barriers, vegetation removal, railing, signage, and contractor activities.

Moderate Level of Change (2 points)

2. **Will the project complement or contrast with the visual character desired by the community?**

Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community? Do you anticipate that the change will be viewed by the public as positive or negative? Research planning documents, or talk with local planners and community representatives to understand the type of visual environment local residents envision for their community.

High Compatibility (1 point)

3. **What level of local concern is there for the types of project features (e.g., bridge structures, large excavations, sound barriers, or median planting removal) and construction impacts that are proposed?**

Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.

Negligible Project Features (0 points)

4. **Will the project require redesign or realignment to minimize adverse change or will mitigation, such as landscape or architectural treatment, likely be necessary?**

Consider the type of changes caused by the project, i.e., can undesirable views be screened or will desirable views be permanently obscured so a redesign should be considered?

No Mitigation Likely (0 points)

5. **Will this project, when seen collectively with other projects, result in an aggregate adverse change (cumulative impacts) in overall visual quality or character?**

Identify any projects (both Caltrans and local) in the area that have been constructed in recent years and those currently planned for future construction. The window of time and the extent of area applicable to possible cumulative impacts should be based on a reasonable anticipation of the viewing public's perception.

Cumulative Impacts Unlikely to Occur (1 point)

Viewer Sensitivity

1. **What is the potential that the project proposal will be controversial within the community, or opposed by any organized group?**

This can be researched initially by talking with Caltrans and local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information.

No Potential (0 point)

2. **How sensitive are potential viewer-groups likely to be regarding visible changes proposed by the project?**

Consider among other factors the number of viewers within the group, probable viewer expectations, activities, viewing duration, and orientation. The expected viewer sensitivity level may be scoped by applying professional judgment, and by soliciting information from other Caltrans staff, local agencies and community representatives familiar with the affected community's sentiments and demonstrated concerns.

Low Sensitivity (1 point)

3. **To what degree does the project's aesthetic approach appear to be consistent with applicable laws, ordinances, regulations, policies or standards?**

Although the State is not always required to comply with local planning ordinances, these documents are critical in understanding the importance that communities place on aesthetic issues. The Caltrans Environmental Planning branch may have copies of the planning documents that pertain to the project. If not, this information can be obtained by contacting the local planning department. Also, many local and state planning documents can be found online at the California Land Use Planning Network.

High Compatibility (1 point)

4. **Are permits going to be required by outside regulatory agencies (i.e., Federal, State, or local)?**

Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements - which are defined by the permitted, may be determined by talking with the project Environmental Planner and Project Engineer. Note: coordinate with the Caltrans representative responsible for obtaining the permit prior to communicating directly with any permitting agency.

Maybe (2 points)

5. **Will the project sponsor or public benefit from a more detailed visual analysis in order to help reach consensus on a course of action to address potential visual impacts?**

Consider the proposed project features, possible visual impacts, and probable mitigation recommendations.

No (1 point)

Calculate Total

It is recommended that you print a copy of these calculations for the project file.

Project Score: 9

Select An Outline Based Upon Project Score

The total score will indicate the recommended VIA level for the project. In addition to considering circumstances relating to any one of the ten questions-areas that would justify elevating the VIA level, also consider any other project factors that would have an effect on level selection.

Score 6-9

No noticeable visual changes to the environment are proposed and no further analysis is required. Print out a copy of this completed questionnaire for your project file or Preliminary Environmental Study (PES).

Score 10-14

Negligible visual changes to the environment are proposed. A brief Memorandum(see sample)addressing visual issues providing a rationale why a technical study is not required.

Score 15-19

Noticeable visual changes to the environment are proposed. An abbreviated VIA is appropriate in this case. The assessment would briefly describe project features, impacts and any avoidance and minimization measures. Visual simulations would be optional. Go to the Directions for using and accessing the Minor VIA Annotated Outline.

Score 20-24

Noticeable visual changes to the environment are proposed. A fully developed VIA is appropriate. This technical study will likely receive public review.Go to the Directions for using and accessing the Moderate VIA Annotated Outline.

State of California
DEPARTMENT OF CONSERVATION
DIVISION OF MINE RECLAMATION
FACE-1 (06-18) Page 1 of 11

Version: 8-31-18

BETA Excel Version of the FACE-1 Financial Assurance Cost Estimate Form.
Please contact DMR if errors are found in this document.

FINANCIAL ASSURANCE COST ESTIMATE

FOR

Zurich Pit (MS #308)

(Mine Name)

CA Mine ID # 91- 14-0143

Reclamation Plan #/Name 96-xx

Prepared by: *(Name & Affiliation)*	This financial assurance cost estimate prepared and submitted pursuant to *(choose one)* :
Forest Becket SMARA Coordinator Caltrans District 9 500 S. Main St, Bishop, CA 93514 Date: 5/28/2025	[x] A new or amended reclamation plan approved on (Date): TBD [ ] An annual mine inspection performed on (Date) _____ [ ] Other: Please Specify: _____

Most Recent Approved Financial Assurance Cost Estimate

Date: NA

Amount: $ NA

Amount of existing Financial Assurance Mechansim(s)

Date: 7/1/2024

Amount: $ 5,000,000.00

I. SUPPORTING DOCUMENTS

This estimate represents the cost of conducting and completing reclamation in accordance with the Surface Mining and Reclamation Act (SMARA) and the following supporting documents:

Reclamation Plan Approval Date and Number

Draft Reclamation Plan (new); Reclamation Plan #: 96-xx.

Permits and/or Environmental Documents Approved as, or Conditional upon, the Reclamation Plan

BLM Letter of Consent for highway easement for mining purposes. Conditional of approval will be initiated with Inyo County after the Recalamtion Plan has been approved.

Other Agency Financial Assurances Securing Reclamation of Disturbed Lands

California State Controller's Office

Wage Rates used in Cost Estimate* *(cost estimates are required to use current 'General prevailing wage determinations made by the director of industrial relations' where applicable (http://www.dir.ca.gov/OPRL/PWD/index.htm) with employer labor surcharge added, or greater)*

'General prevailing wage determinations' (CA Department of Industrial Relations) was utilized for the associated wage rate estimates.

Equipment Rates used in Cost Estimates* *(use current 'Labor Surchage and Equipment Rental Rates (Cost of Equipment Ownership)' equipment rates published by Caltrans (http://www.dot.ca.gov/hq/construc/equipmnt.html) or other publicly available and verifiable local rates)*

'Labor surcharge and equipment rental rates (cost of equipment ownership),' as published by Caltrans, was utilized for the associated equipment rental rate estimates.

Equipment Production Rates used in Cost Estimate *(Use of current Caterpillar Performance Handbook or equivalent published production rates is required)*

'Caterpillar Performance Handbook' was utilized for the associated equipment production rates.

**Many mine sites are remote projects that require hours of travel (to and from) and sometimes require additional time to prepare for even the simplest of tasks. In accordance with labor Code Sections 1773.1 and 1773.9, contractors are required to make travel and/or subsistence (per diem) payments to each worker to execute the work. These arrangements can be quite variable and site specific.*

Attachments:

(add additional pages as needed)

II. Description of Current Site Conditions

(i.e., disturbed acres, slope conditions, excavation depths, topsoil and overburden stockpiles, equipment and facilities, reclamation in progress, erosion control status, required corrective actions, etc.)

Site was an active BLM community use pit accessed via special use permits until 2005. Currently site is used for ilegal dumping, target shooting, and OHV staging.

III. Description of Anticipated Site Conditions (12 months from date of estimate)

(i.e., increase of disturbed acres, increase of depth, increases in amount of equipment and/or facilities, required corrective actions, etc.)

First 12 months of operation will entail some minor northwest access road grading, earthen berm established at southwest road to block access, illegal dumping material clean up and transport to landfill, and some minor ground disturbance for grading of the phase one pit floor (approximately 1/2 acre).

IV. Description/Justification of Cost Increase/Decrease

This is the first FACE prepared for the site required for the reclamation application package.

(add additional pages as needed)

V. PLANT STRUCTURES AND EQUIPMENT REMOVAL *(use multiple sheets as needed)*

Provide documentation showing that rates, prices, and wages are available locally to all persons, including the lead agency and/or the Department.

Current Site Condition:

No plant structures or equipment anticipated to be left on site.

Reclamation Plan Performance Standard (End Use):

N/A

Describe tasks:

N/A

Equipment on site wholly owned by operator?: ☐ YES ☐ NO
(if no, please provide the name/s and contact information for any lien holder)

N/A

(add additional pages as needed)

State of California
DEPARTMENT OF CONSERVATION
DIVISION OF MINE RECLAMATION
FACE-1 (06-18) Page 5 of 11

V. PLANT STRUCTURES & EQUIPMENT REMOVAL

(↑ Describe Reclamation Activity Being Estimated)

Methods to be used:

A. Equipment - List equipment to complete identified task. For large reclamation jobs, separate mine areas.

Equipment	Unit of Measure	$/Unit	# of Units	Cost ($)
N/A		$0.00	0.0	$0
		$0.00	0.0	$0
		$0.00	0.0	$0
		$0.00	0.0	$0
		$0.00	0.0	$0
		Total Equipment Cost for this Task =		$0

B. Labor - List all labor categories to complete identified task

Labor Category	$/Hour (prevailing wage)	Labor Surcharge/Hr *(where applicable)* (enter % of wage) 0.0%	# of Hours	Cost ($)
N/A	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
		Total Labor Cost for this Task =		$0

C. Demolition - List all structures and equipment to be dismantled or demolished and removed from site

Structure/Equipment to be removed	Type of Material	Volume/ Quantity	Unit Cost Basis	Disposal Cost	Cost ($)
N/A		0.00	$0.00	$0.00	$0
		0.00	$0.00	$0.00	$0
		0.00	$0.00	$0.00	$0
		0.00	$0.00	$0.00	$0
		0.00	$0.00	$0.00	$0
				Total Materials Cost for this Task =	$0

D. Total Direct Cost of Structure and Equipment Removal (Total A+B+C)

Equipment Cost + Labor Cost + Demolition Cost = $0

E. Net Salvage Value* (Supported by properly prepared third party estimate, bid, or cost calculation)

Net Salvage Value = $ **0.00**

F. Total Cost of Structure and Equipment Removal (Subtract Line D from Line E)

Total Cost of Structure and Equipment Removal = **$0**

NOTE: Above **Total Cost** will display $0.00 if net of entered removal costs and salvage value is negative.

*Note: Salvage value may only be used to offset the direct cost of removing the single item for which salvage value is being claimed. Salvage value shall not be used to offset any other demolition, general cleanup, or reclamation costs.

VI. PRIMARY RECLAMATION ACTIVITY

Use multiple sheets as necessary to estimate the cost of each activity required. Provide documentation showing that rates, prices, and wages are available locally to the lead agency and/or the Department if necessary.

Current Site Conditions:

No anticipated reclamation activities planned.

Reclamation Plan Performance Standard (End Use):

Erosion and sediment control: Control monitoring will be completed at the same time and frequency that the vegetation monitoring is done. The results will be used to aid in identifying areas of potential failures and to require the use of remedial measures before problem areas cause widespread failures. Sedimentation basins will be inspected following the season's first major storm event or at a minimum of annually. Basins will be cleaned out as needed to maintain a minimum storage capacity. Slope stability: With the exception of the minor cut roads, no large man-made slope shall be steeper than 3:1 (H:V).

Describe tasks, methods, equipment, etc:
Decompaction, cut, fill, haul, slope reduction, compaction, grading, topsoil placement, drainage work, soil amendment, special requirements, etc. Separate sheets may be used for each task if necessary.

Remove metal gate, install earthen berms on primary access road, and decompact 1/2 acre of disturbance.

Provide Quantities:
Overburden and topsoil, cut and fill, import or export (cubic yards), area (acres), haul distance (feet), equipment production rates (cubic yards/hour, or as applicable), etc.

1/2 acre of ripping for decompaction.

(add additional pages as needed)

State of California
DEPARTMENT OF CONSERVATION
DIVISION OF MINE RECLAMATION
FACE-1 (06-18) Page 7 of 11

VI. PRIMARY RECLAMATION ACTIVITY

Removal of dirt roadways, final re-grading of mine areas to final approved reclaimed contour

(↑ Describe Reclamation Activity Being Estimated)

Acres:	0.5	Overburden (cy):	N/A
Haul Distance (ft):	N/A	Topsoil (cy):	N/A
Production Rate (cy/hr):	N/A	*(NOTE: no automatic calculations occur to data in this upper table)*	

Methods to be used:

A. Equipment - List equipment to complete identified task. For large reclamation jobs, separate mine areas.

Equipment	Unit of Measure	$/Unit	# of Units	Cost ($)
Cat D-8L dozer w/ripper	hour	$245.13	4.0	$981
Water truck (48-60)	hour	$91.76	4.0	$367
Cat 12G 61M Grader	hour	$101.80	4.0	$407
		$0.00	8.0	$0
		$0.00	0.0	$0
		$0.00	0.0	$0
		Total Equipment Cost for this Task =		$1,755

B. Labor - List all labor categories to complete identified tasks

Labor Category	$/Hour (prevailing wage)	Labor Surcharge/Hr *(where applicable)* (enter % of wage) 0.0%	# of Hours	Cost ($)
Heavy equipment operator (G-8)	$92.73	$0.00	8.0	$742
Truck driver G-3 (Teamster)	$75.18	$0.00	4.0	$301
Laborer (G-1)	$71.69	$0.00	8.0	$574
	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
		Total Labor Cost for this Task =		$1,616

C. Materials - List all materials required to complete identified task

Item	$/Unit	Sales tax (enter local rate in %) 0.0%	Quantity	Cost ($)
N/A	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
		Total Materials Cost for this Task =		$0

D. Total Direct Cost for this task

Equipment Cost + Labor Cost + Materials Cost = $3,371

VII. REVEGETATION *(use multiple sheets as needed)*

Provide documentation showing that rates, prices, and wages are available locally to the lead agency and/or the Department.

Current Site Condition:

No reclamation planned to be underway in first 12 months.

Reclamation Plan Performance Standard (End Use):

Undisturbed site-indigenous shrub cover was estimated to be 0.32% and reclamation will strive to acheive 0.16% indigenous shrub cover. Reclamation will also strive to achieve a species richness of three per 50 square meters.

Describe Tasks:

Approximately 1/2 acre plus access road will be revegetated usting the topsoil and/or the wind diserpal for seed proprogation. Decompaction, topsoil spreading, and surface roughing of the site will take place during the fall, late October to December. Prior to spreading the stored topsoil and fines, all compacted areas will be de-compacted (ripped or disked) to facilitate root growth. Topsoil berms will be spread on slopes up to six inches deep. Slopes will be heavily roughened to mimic the linear crevices of the surround undisturbed landscape. If vegetation success criteria is not met using either the berm method or roughening of the slopes method, then hand gathered seeds will be broadcast and mixed into the top I /2-inch of the substrate, by either raking or dragging a chain across the seedbed or othe.r suitable method

State of California
DEPARTMENT OF CONSERVATION
DIVISION OF MINE RECLAMATION
FACE-1 (06-18) Page 9 of 11

VII. REVEGETATION *(use multiple sheets as needed)*

Decompaction, surface roughing and hand gathering/seeding of the site, and topsoil application

(↑ Describe Revegetation Activity Being Estimated)

Methods to be used:

A. Equipment - List equipment to complete identified task. For large reclamation projects, separate mine areas.

Equipment	Unit of Measure	$/Unit	# of Units	Cost ($)
Cat D-8L dozer w/ ripper	hour	$245.13	4.0	$981
Water Truck (48-60)	hour	$91.76	4.0	$0
	hour	$0.00	0.0	$0
		$0.00	0.0	$0
		$0.00	0.0	$0
		$0.00	0.0	$0
		Total Equipment Cost for this Task =		$981

B. Labor - List all labor categories to complete identified task.

Labor Category	$/Hour (prevailing wage)	Labor Surcharge /HR (where applicable) (enter % of wage) 0.0%	# of Hours	Cost ($)
Labor G-1	$71.69	$0.00	16.0	$1,147
Heavy Equipment Operator	$92.73	$0.00	4.0	$371
Teamster G-3	$75.18	$0.00	4.0	$301
	$0.00	$0.00	0.0	$0
	$0.00	$0.00	0.0	$0
		Total Labor Cost for this Task =		$1,819

C. Materials - List all materials required to complete identified task

Item/Plant Species	Unit of measure	$/Unit	Sales tax (enter local rate in %) 0.0%	Quantity	Cost ($)
NA		$0.00	$0.00	5.0	$0
		$0.00	$0.00	0.0	$0
		$0.00	$0.00	0.0	$0
		$0.00	$0.00	0.0	$0
		$0.00	$0.00	0.0	$0
		$0.00	$0.00	0.0	$0
		$0.00	$0.00	0.0	$0
		$0.00	$0.00	0.0	$0
		$0.00	$0.00	0.0	$0
		$0.00	$0.00	0.0	$0
		Total Materials Cost for this Task =			$0

D. Total Direct Cost for this task

Equipment Cost + Labor Cost + Materials Cost = $2,799

VIII. MISCELLANEOUS COSTS *(use multiple sheets as needed)*

Provide documentation showing that rates, prices, and wages are available locally to all persons, including the lead agency and/or the Department.

Examples of this type of cost may include temporary storage of equipment and materials off site, special one-time permits (i.e. transportation permits for extra wide overweight loads, etc.), decommissioning a process mill (i.e. decontamination of equipment), disposal of warehouse inventories, well abandonnment, remediation of fueling and waste oil storage sites, septic system removal, costs to prepare closure and monitoring reports, site security, preserving potable water and maintaining utilities, etc.

Item/Task	Quantity	$/Unit	Cost ($)
N/A	0.0	$0.00	$0
	0.0	$0.00	$0
	0.0	$0.00	$0
	0.0	$0.00	$0
	0.0	$0.00	$0
	0.0	$0.00	$0
	0.0	$0.00	$0
	0.0	$0.00	$0
	0.0	$0.00	$0
	0.0	$0.00	$0

Total Miscellaneous Costs = $0

IX. MONITORING COSTS

Monitoring Task	$/Visit	# of Visits/Year	# of Monitoring Years	Cost ($)
Biological Monitoring & Annual Reporting	$5,841.00	1.0	5.0	$29,205
	$0.00	0.0	0.0	$0
	$0.00	0.0	0.0	$0
	$0.00	0.0	0.0	$0
	$0.00	0.0	0.0	$0
	$0.00	0.0	0.0	$0
	$0.00	0.0	0.0	$0

Total Monitoring Costs = $29,205

State of California
DEPARTMENT OF CONSERVATION
DIVISION OF MINE RECLAMATION
FACE-1 (06-18) Page 11 of 11

Version: 8-31-18

X. SUMMARY OF COSTS

This section shall be used to summarize all the cost sheets in one place.

(V) Total of all Plant Structures & Equipment Removal Costs	$	0
(VI) Total of all Primary Reclamation Activities Costs	$	3,371
(VII) Total of all Revegetation Costs	$	2,799
(VII) Total of all Miscellaneous Costs	$	0
(IX) Total of all Monitoring Costs	$	29,205
Total of Direct Costs	$	**35,375**

XI. SUPERVISION / PROFIT & OVERHEAD / CONTINGENCIES / MOBILIZATION

(A) Supervision (6.5 %)		$	2,284
(B) Profit/Overhead (13.5 %)		$	4,776
(C) Contingencies (10.0 %)		$	3,538
(D) Mobilization (8.0 %)		$	2,830
Total of Indirect Costs		$	**13,427**
Total of Direct and Indirect Costs		$	**48,802**
(E) Lead Agency and/or Dept. of Conservation Administrative Costs	5%	$	2,440

Total Estimated Cost of Reclamation $ **51,242**

Reclamation Plan Content Checklist

The Division of Mine Reclamation (DMR) reviews reclamation plans for compliance and completeness pursuant to Public Resources Code (PRC) Section 2772.1(b)(1). When submitting a reclamation plan to DMR, the lead agency must certify that the reclamation plan is a complete submission and is in compliance with SMARA and associated regulations and the lead agency's mining ordinance pursuant to PRC 2772.1(a)(3)(A-E). Additionally, pursuant to PRC 2772.1(a)(2), information prepared as part of a permit application or environmental document (pursuant to CEQA) shall be incorporated into the reclamation plan if it is used to satisfy the requirements of SMARA and associated regulations. These items shall be properly indexed in a Required Contents Chart and included in an appendix to the reclamation plan.

This checklist may assist operators and lead agencies when preparing and reviewing draft proposed reclamation plans and reclamation plan amendments in determining if they meet the minimum content requirements of the Surface Mining and Reclamation Act of 1975 (SMARA) and associated regulations (see box below for sections relevant to reclamation plans).

Surface Mining and Reclamation Act of 1975
Public Resources Code (PRC)
Division 2. Geology, Mines and Mining
Chapter 9. Surface Mining and Reclamation Act of 1975
Section 2710 et seq.

This portion includes requirements for reclamation plans.

Associated Regulations
California Code of Regulations (CCR)
Title 14. Natural Resources
Division 2. Department of Conservation
Chapter 8. Mining and Geology
Subchapter 1. State Mining and Geology Board

Article 1. Surface Mining and Reclamation Practice. Commencing with Section 3500

This portion includes minimum acceptable mining and reclamation practices for surface mining operations.

Article 9. Reclamation Standards. Commencing with Section 3700

This portion includes performance standards, which may apply to surface mining operations pursuant to CCR Section 3700.

The checklist is divided into seven topical areas: General Considerations, Geology and Geotechnical, Hydrology and Water Quality, Sensitive Species and Habitat, Topsoil, Revegetation, and Agriculture. To use the checklist, place a checkmark next to items that have been addressed by the reclamation plan or leave it blank if the reclamation plan is deficient. Alternatively, write N/A if the item is not applicable to the specific surface mining operation being reviewed.

Disclaimer: This checklist, prepared by DMR, paraphrases portions of SMARA and associated regulations that address the content of reclamation plans and plan amendments. DMR staff uses this checklist internally in performing our review of reclamation plans. However, use of this checklist is not required and it is provided only as a helpful tool. DMR always recommends consulting the full text of SMARA and associated regulations, available at the link below. Additionally, completion of this checklist does not guarantee completeness or compliance of the reclamation plan pursuant to PRC Section 2772.1(b)(1). Analysis of completeness and compliance requires thorough review of each specific project.

http://www.conservation.ca.gov/index/Pages/lawsregs.aspx

Mine Name: zurich pit	Checklist Completed by: Forest Becket
End Use: open wildlife habitat	Date: 11/07/2023

GENERAL CONSIDERATIONS

Authority	Requirements/Practices/Standards	✓ or N/A
PRC 2772(b)	Required contents chart: A chart identifying the location (e.g. page number, chapter, appendix, or other location in the reclamation plan) of content that meets the requirements of PRC Sections 2772, 2773, 2773.3 and CCR Articles 1 and 9 (as delineated in this checklist).	ii
PRC 2772(c)(1)	Contact information: Name and address of the surface mining operator and any person designated by the operator as an agent for service of process (must reside in CA).	1.1.0
PRC 2772(c)(2)	Material quantity and type: The anticipated total quantity and type of minerals to be mined (see Annual Report Instructions, Exhibit B, for mineral types and units of measure).	2.2.1 3.3.0
PRC 2772(c)(3)	Dates: The initiation and termination dates of mining (be as specific as possible, e.g. December 31, 2030).	3.2.0
PRC 2772(c)(4)	Depth of mining: The maximum anticipated depth of the surface mining operation.	3.1.1
PRC 2772(c)(5) (A-F)	Reclamation plan maps shall include: Size and legal description of lands affected by surface mining operations;	Appx B, C
	Names and addresses of owners of all surface interests and mineral interests;	1.1.0-1.3.0
	Property lines, setbacks, and the reclamation plan boundary;	Appx B
	Existing and final topography with contour lines at appropriate intervals;	Appx B
	Detailed geologic description of the area of the surface mining operation;	2.2.1
	Locations of railroads, utility features, and roads (access roads, temporary roads to be reclaimed, and any roads remaining for the end use).	Appx B
	All maps, diagrams, or calculations that are required to be prepared by a California-licensed professional shall include the preparer's name, license number, signature & seal.	Appx B
PRC 2772(c)(6)	Mining method and schedule: A description of the mining methods and a time schedule that provides for completion of mining on each segment so that reclamation can be concurrent or phased.	Appx C
PRC 2772(c)(7)	Subsequent use(s): A description of the proposed subsequent use(s) after reclamation	4.1.0
	Evidence that all landowners have been notified of the proposed use.	
PRC 2772(c)(9)	Impact on future mining: A statement regarding the impact of reclamation on future mining on the site.	4.2.0
PRC 2772(c)(10)	Signed statement: Statement signed by the operator accepting responsibility for reclamation of the mined lands per the reclamation plan.	n/a
PRC 2776(b-c)	Pre-SMARA areas: Reclamation plans shall apply to operations conducted after January 1, 1976 or to be conducted in the future. Mined lands disturbed prior to January 1, 1976 *and not disturbed after that date* may be excluded from the reclamation plan.	n/a
CCR 3502(b)(2)	Public health and safety: A description of how any potential public health and safety concerns that may arise due to exposure of the public to the site will be addressed.	4.8.0
CCR 3709(a)	Equipment storage and waste disposal: Designate areas for equipment storage and show on maps.	Appx B 3.4.3
	All waste shall be disposed of in accordance with state and local health and safety ordinances.	3.4.3
CCR 3709(b)	Structures and equipment removed:	

	Structures and equipment should be dismantled and removed at closure, except as demonstrated to be necessary for the proposed end use.	4.4.3
CCR 3713(a)	Well closures: Drill holes, water wells, monitoring wells will be completed or abandoned in accordance with laws, unless demonstrated necessary for the proposed end use.	n/a
CCR 3713(b)	Underground openings: Any portals, shafts, tunnels, or openings will be gated or protected from public entry, and to preserve access for wildlife (e.g. bats).	n/a

GEOLOGY AND GEOTECHNICAL

Authority	Requirements/Practices/Standards	✓ or N/A
PRC 2772(c)(5)	A description of the general geology of the area	2.2
	A detailed description of the geology of the mine site.	2.2.1
PRC 2773.3	If a metallic mine is located on, or within one mile of, any "Native American sacred site" and is located in an "area of special concern, " the reclamation plan shall require that all excavations and/or excess materials be backfilled and graded to achieve the approximate original contours of the mined lands prior to mining.	n/a
CCR 3502(b)(4)	The source and disposition of fill materials used for backfilling or grading shall be considered in the reclamation plan.	4.4.0 3.4.2
CCR 3502(b)(3)	The designed steepness and treatment of final slopes must consider the physical properties of slope materials, maximum water content, and landscaping.	4.4.0
	The reclamation plan shall specify slope angles flatter than the critical gradient for the type of slope materials.	4.4.1
	When final slopes approach the critical gradient, a Slope Stability Analysis will be required.	4.4.1
CCR 3704.1	Backfilling required for surface mining operations for metallic minerals.	n/a
CCR 3704(a)	For urban use, fill shall be compacted in accordance with Uniform Building Code, local grading ordinance, or other methods approved by the lead agency.	n/a
CCR 3704(b)	For resource conservation, compact to the standards required for that end use.	n/a
CCR 3704(d)	Final reclamation fill slopes shall not exceed 2:1 (H:V), except when allowed by site-specific engineering analysis, and the proposed final slope can be successfully revegetated. See also Section 3502(b)(3).	4.4.1
CCR 3704(e)	At closure, all fill slopes shall conform with the surrounding topography or approved end use.	4.4.0
CCR 3704(f)	Final cut slopes must have a minimum slope stability factor of safety that is suitable for the end use and conforms with the surrounding topography or end use.	4.4.1

HYDROLOGY AND WATER QUALITY

Authority	Requirements/Practices/Standards	✓ or N/A
PRC 2770.5	For operations within the 100-year flood plain (defined by FEMA) and within one mile up- or downstream of a state highway bridge, Caltrans must be notified and provided a 45-day review period by the lead agency.	n/a
PRC 2772(c)(8)(A)	Description of the manner in which contaminants will be controlled and mine waste will be disposed.	3.4.3
PRC 2772(c)(8)(B)	The reclamation plan shall include a description of the manner in which stream banks/beds will be rehabilitated to minimize erosion and sedimentation.	n/a
PRC 2773(a)	The reclamation plan shall establish site-specific sediment and erosion control criteria for monitoring compliance with the reclamation plan.	4.7.0
CCR 3502(b)(6)	Temporary stream and watershed diversions shall be detailed in the reclamation plan.	n/a
CCR 3503(a)(2)	Stockpiles of overburden and minerals shall be managed to minimize water and wind erosion.	3.4.4

CCR 3503(b)(2)	Operations shall be conducted to substantially prevent siltation of groundwater recharge areas.	2.4.1 3.4.1
CCR 3503(a)(3)	Erosion control facilities shall be constructed and maintained where necessary to control erosion.	3.4.1
CCR 3503(b)(1)	Settling ponds shall be constructed where they will provide a significant benefit to water quality.	3.4.1 Appx B
CCR 3503(d)	Disposal of mine waste and overburden shall be stable and shall not restrict natural drainage without suitable provisions for diversion.	3.4.1
CCR 3503(e)	Grading and revegetation shall be designed to minimize erosion and convey surface runoff to natural drainage courses or interior basins.	3.4.1 3.4.2 4.7.0
	Spillway protection shall be designed to prevent erosion.	n/a
CCR 3706(a)	Surface mining and reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water.	4.7.0 4.10.0
CCR 3706(b)	Water quality, recharge potential, and groundwater storage that is accessed by others shall not be diminished.	2.4.1
CCR 3706(c)	Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of surface mining operations to minimize siltation of lakes and water courses as per RWQCB/SWRCB.	3.4.1 4.4.2
CCR 3706(d)	Surface runoff and drainage shall be controlled to protect surrounding land and water resources.	3.4.1
	Erosion control methods shall be designed for not less than 20 year/1 hour intensity storm event.	3.4.1
CCR 3706(e)	Impacted drainages shall not cause increased erosion or sedimentation. Mitigation alternatives shall be proposed in the reclamation plan.	4.10.1
CCR 3706(f)(1)	Stream diversions shall be constructed in accordance with the Lake and Streambed Alteration Agreement (LSAA) between the operator and the Department of Fish and Wildlife.	n/a
CCR 3706(f)(2)	Stream diversions shall also be constructed in accordance with Federal Clean Water Act and the Rivers and Harbors Act of 1899.	n/a
CCR 3706(g)	All temporary stream diversions shall eventually be removed and the affected land reclaimed.	n/a
CCR 3710(a)	Surface and groundwater shall be protected from siltation and pollutants in accordance with the Porter-Cologne Act, the Federal Clean Water Act, and RWQCB/SWRCB requirements.	3.4.3/1 3.6.1 4.7.0
CCR 3710(b)	In-stream mining shall be conducted in accordance with Section 1600 et seq. of the California Fish and Game Code, Section 404 of the Clean Water Act, and Section 10 of the Rivers and Harbors Act of 1899.	n/a
CCR 3710(c)	In-stream mining shall be regulated to prevent impacts to structures, habitats, riparian vegetation, groundwater levels, and banks.	n/a
	In-stream channel elevations and bank erosion shall be evaluated annually using extraction quantities, cross-sections, and aerial photos.	n/a
CCR 3712	Mine waste and tailings and mine waste disposal units are governed by SWRCB waste disposal regulations and shall be reclaimed in accordance with this article: CCR Article 1. Surface Mining and Reclamation Practice. Section 3500 et seq.	3.3.0 3.4.3 3.6.1

SENSITIVE SPECIES AND HABITAT

Authority	Requirements/Practices/Standards	✓ or N/A
CCR 3502(b)(1)	A description of the environmental setting (identify sensitive species, wildlife habitat, sensitive natural communities, e.g. wetlands).	2.5.0-2.5.2.2
	Impacts of reclamation on surrounding land uses.	4.1.0
CCR 3503(c)	Fish and wildlife habitat shall be protected by all reasonable measures.	appx D
CCR 3703(a)	Sensitive species shall be conserved or mitigated as prescribed by the federal and California Endangered Species Acts.	appx D
CCR 3703(b)	Wildlife habitat shall be established on disturbed land at least as good as pre-project, unless end use precludes its use as wildlife habitat.	2.5.2 appx D
CCR 3703(c)	Wetlands shall be avoided or mitigated at 1:1 minimum for both acreage and habitat value.	n/a
CCR 3704(g)	Piles or dumps shall not be placed in wetlands without mitigation.	n/a
CCR 3710(d)	In-stream mining shall not cause fish to be trapped in pools or off-channel pits, or restrict migratory or spawning activities.	n/a

TOPSOIL

Authority	Requirements/Practices/Standards	✓ or N/A
CCR 3503(a)(1)	Removal of vegetation and overburden preceding mining shall be kept to a minimum.	3.4.2 appx A
CCR 3503(f)	When the reclamation plan calls for resoiling, mine waste shall be leveled and covered with a layer of finer material. A soil layer shall then be placed on this prepared surface.	n/a
	The use of soil conditioners, mulches, or imported topsoil shall be considered where such measures appear necessary.	4.6.4
CCR 3704(c)	Mine waste shall be stockpiled to facilitate phased reclamation and kept separate from topsoil or other growth media.	n/a
CCR 3705(e)	If soil is altered or other than native topsoil, soil analysis is required. Add fertilizers or soil amendments if necessary.	n/a
CCR 3711(a)	All salvageable topsoil shall be removed as a separate layer.	appx A
	Topsoil and vegetation removal should not precede mining by more than one year.	appx A
CCR 3711(b)	Topsoil resources shall be mapped prior to stripping and location of topsoil stockpiles shown on map included in the reclamation plan.	appx B
	Topsoil and other growth media shall be maintained in separate stockpiles.	appx A
	Test plots may be required to determine the suitability of growth media for revegetation purposes.	4.6.2
CCR 3711(c)	Soil salvage operations and phases of reclamation shall be set forth in the reclamation plan to minimize the area disturbed and to achieve maximum revegetation success.	appx B
CCR 3711(d)	Topsoil and growth media shall be used to phase reclamation as soon as can be accommodated following the mining of an area.	appx A,B
	Topsoil stockpiles shall not be disturbed until needed for reclamation.	3.4.2, 4.5.0
	Topsoil stockpiles shall be clearly identified.	appx B
	Topsoil shall be planted with vegetation or otherwise protected to prevent erosion and discourage weeds.	3.4.2 4.5.0
CCR 3711(e)	Topsoil shall be redistributed in a manner resulting in a stable, uniform thickness consistent with the end use.	4.5.0

REVEGETATION

Authority	Requirements/Practices/Standards	✓ or N/A
PRC 2773(a)	The reclamation plan shall be specific to the property and shall establish site-specific criteria for evaluating compliance with the reclamation plan with respect to revegetation.	4.6.0
CCR 3503(g)	Available research regarding revegetation methods and selection of species given the topography, resoiling characteristics, and climate of the mined areas shall be used.	4.6.2
CCR 3705(a)	Baseline studies shall be conducted prior to mining activities to document vegetative cover, density, and species richness.	appx D and table 5
	Vegetative cover shall be similar to surrounding habitats and self-sustaining.	4.9.3
CCR 3705(b)	Test plots shall be conducted simultaneously with mining to ensure successful implementation of the proposed revegetation plan.	4.10.3
CCR 3705(c)	Decompaction methods, such as ripping and disking, shall be used in areas to be revegetated to establish a suitable root zone for planting.	4.5.0
CCR 3705(d)	Roads shall be stripped of roadbase materials, resoiled, and revegetated, unless exempted.	4.6.0
CCR 3705(f)	Temporary access shall not disrupt the soil surface on arid lands except where necessary for safe access. Barriers shall be installed to keep unauthorized vehicles out.	appx A, B
CCR 3705(g)	Use local native plant species (unless non-native species meet the end use).	4.6.2
	Areas to be developed for industrial, commercial, or residential shall be revegetated for the interim period to control erosion.	n/a
CCR 3705(h)	Planting shall be conducted during the most favorable period of the year for plant establishment.	4.6.0
CCR 3705(i)	Use soil stabilizing practices and irrigation when necessary to establish vegetation.	4.6.4 4.6.5

CCR 3705(j)	If irrigation is used, demonstrate that revegetation has been self-sustaining without irrigation for two years prior to the release of financial assurance.	NA
CCR 3705(k)	Noxious weeds shall be monitored and managed.	4.6.7
CCR 3705(l)	Plant protection measures such as fencing and caging shall be used where needed for revegetation success. Protection measures shall be maintained until revegetation efforts are successfully completed and the lead agency authorizes removal.	4.6.6
CCR3705(m)	Quantitative success standards for vegetative cover, density, and species richness shall be included in the reclamation plan.	4.9.3
	Monitoring to occur until success standards have been achieved.	4.10.0
	Sampling techniques for measuring success shall be specified. Sample size must be sufficient to provide at least an 80 percent statistical confidence level.	4.10.3

AGRICULTURE

Authority	Requirements/Practices/Standards	✓ or N/A
CCR 3707(a)	Where the end use will be agriculture, prime agricultural land shall be returned to a fertility level specified in the reclamation plan.	NA
CCR 3707(b)	Segregate and replace topsoil in proper sequence by horizon in prime agricultural soils.	NA
CCR 3707(c)	Post reclamation productivity rates for prime agricultural land must be equal to pre-project condition or to a similar site for two consecutive years.	NA
	Productivity rates shall be specified in the reclamation plan.	NA
CCR 3707(d)	If fertilizers and amendments are applied, they shall not cause contamination of surface or groundwater.	NA
CCR 3708	For sites where the end use is to be agricultural, non-prime agricultural land must be reclaimed to be capable of sustaining economically viable crops common to the area.	NA