Dragoon Gulch Trail

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

November 2016

Prepared for:

City of Sonora
94 Washington Street
Sonora, CA, 95370
(209) 532-4541

Prepared by:

Development Impact, Inc.
5050 Laguna Boulevard, Ste. 112-613
Elk Grove, CA 95758
(916) 206-1871

City of Sonora
Dragoon Gulch Project
Mitigated Negative Declaration
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a) Project Title: Dragoon Gulch Trail Expansion Project

b) Lead agency name and address: City of Sonora, Sonora, CA, 95370

c) Contact person and phone number: Paula M. Daneluk, AICP, Contract Planner (209) 532-4541

d) Project Description:

The City of Sonora proposes to complete the build-out of the Dragoon Gulch Recreational Area, which is owned and operated by the City of Sonora. Approximately 35 acres were previously developed with a network of four (4) foot wide natural surface trails and the proposed plan would extend the existing trail system throughout the remaining 67 acres. The proposed trail system would be built as a multi-use trail for pedestrians and cyclists.

Dragoon Gulch, the Trail's namesake, is a seasonal waterway, with headwaters approximately 2,000 feet north of Racetrack Road which creates the northern boundary of the project area. The uses surrounding the Dragoon Gulch Trail area includes primarily residential and some commercial uses. As shown in the Aerial Picture, the western boundary of the project is a residential neighborhood along Leland Drive and Rosebud Road. The proposed project designates an 80 foot buffer between the natural surface trails and the neighborhood fence boundaries. The eastern side is also primarily residential bordered by Dragoon Court and Arbona Circle North. On the southeast side is an existing park entrance off of Alpine Lane. North of the property is residential. The southern boundary is currently undeveloped.

The currently undeveloped area of Dragoon Gulch Park lies on the westerly side of the Dragoon Gulch ravine. Within the proposed expansion area are some westerly-facing slopes abutting the City/County line at the westerly boundary of the project, however, the Dragoon Gulch Trail Area predominately contains easterly-facing slopes. Three distinct summits areas are proposed to offer views of the surrounding area, but are not currently accessible via the existing trail network. The Dragoon Gulch expansion area is densely overgrown with underbrush, primarily Manzanita and poison oak. Oak Woodlands and Oak Chaparral ecotypes predominate the area. Clearing for trail access and fire control would be completed in the First Phase of the project. Fuel removal would be accomplished by thinning and limbing up Manzanita, and by removing dead brush near the trail, though sensitivity to views and preservation of the natural context would be incorporated into the project in all phases. Setbacks from existing residences, seasonal waterways, and historical or natural resources have been identified and would be incorporated during the build-out of the project as discussed in the Dragoon Gulch Trail Master Plan.

To accommodate trail expansion, a new 20-stall parking lot with other amenities such as a bathroom area and picnic area are proposed adjacent to the current caretaker's residence. The proposed parking lot would be situated on a previously cleared horse coral, and would use the existing paved driveway for egress. Another roadway would be constructed, as shown in the Proposed Access and Parking Area figure, to allow for a single lane ingress to the site. Adjacent to the proposed parking lot, the build-out would include a public restroom that would be approximately 160 square feet and include a drinking fountain, a group picnic area with an overhead structure and picnic tables, as well as demonstration planting areas. The existing barn may be re-purposed to include storage or other activities.

The existing driveway entrance off Racetrack Road would be expanded to a two-way driveway, and may ultimately include a pull-out lane and/or bus pull-out and pad with a transit shelter. These improvements

may require a right-of-way dedication to the County to facilitate the ultimate street section, and would be setback accordingly. The driveway entrance would include a median to preserve existing trees and allow turn-around movements prior to the gates that would control vehicle access to the rest of the property. Access would be provided by a new paved driveway, approximately 800 feet long and 12 feet wide. Construction for this access would require grading a new bench in the existing slope above the existing driveway, and may include short sections of gabion retaining structure, no greater than six (6) feet high (four (4) feet exposed), to minimize the extent of the impacted area. The existing driveway and proposed access and parking lot would support small passenger vehicles and trucks, but would not support school buses, trailers, or other longer-wheelbased vehicles.

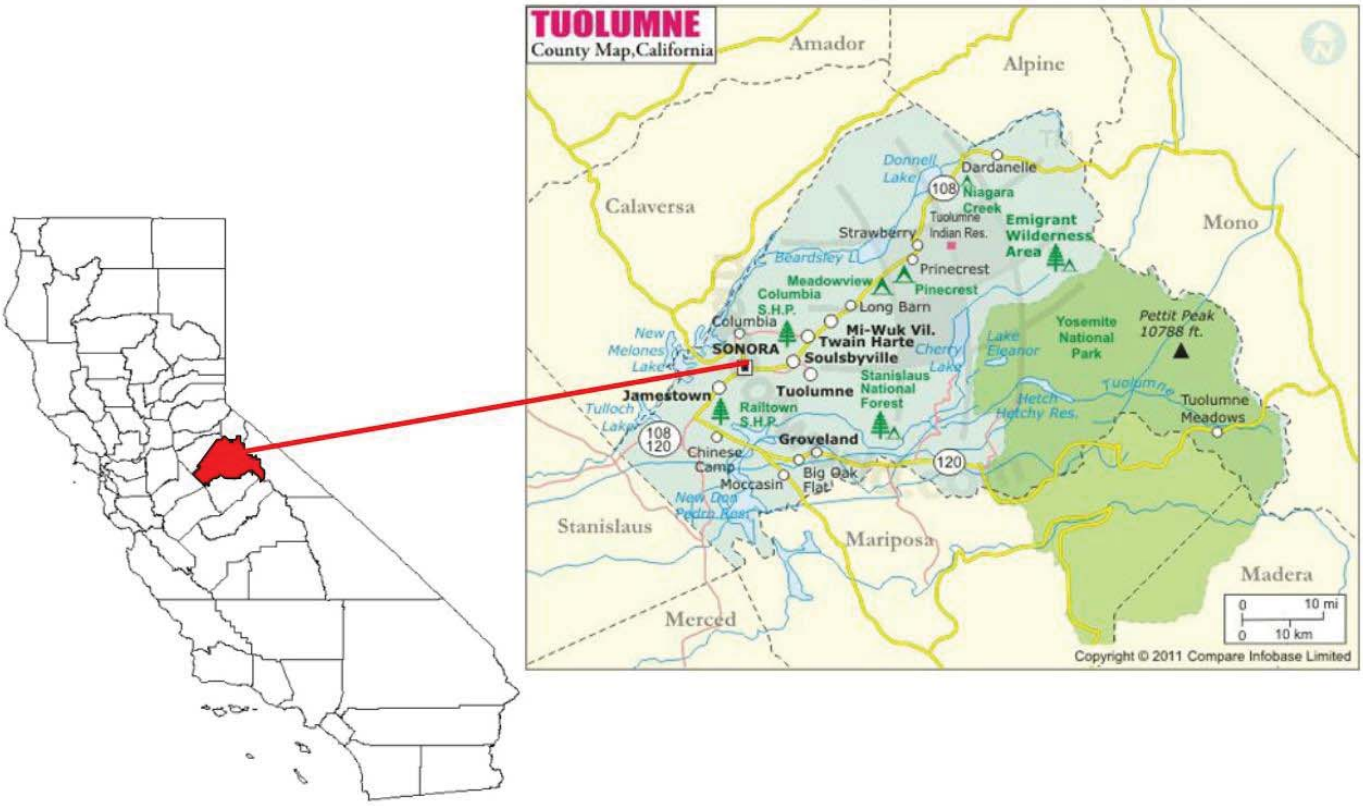
The proposed project designates a portion of the trails to meet accessible codes to provide access to users of all abilities. The accessible portion of the trails includes a summit opportunity and a path with a less than 5% grade. Rest areas (minimum five (5) feet X five (5) feet wide) would be provided at 200 feet maximum intervals along the accessible trail sections to allow for passing and intermittent stops. Benches would be ultimately provided at intervals no greater than 600 feet. One new accessible parking stall would be provided within the proposed 20-stall parking lot. An accessible path of travel would be provided to all facilities, include the restroom, drinking fountain, picnic area, and trailhead.

As shown in the Proposed Trail Map, the proposed trail network would transverse the entire Dragoon Gulch Park Area. Construction of the trail will result in slope disturbance above and below the trail to varying degrees. Experienced trail builders or supervision by experienced trail builders would be utilized to create trails with Best Management Practices.

The following three phases would be implemented as an incremental approach to construction that would allow an immediate shovel ready project as well as allow for the inclusion of community based organizational involvement.

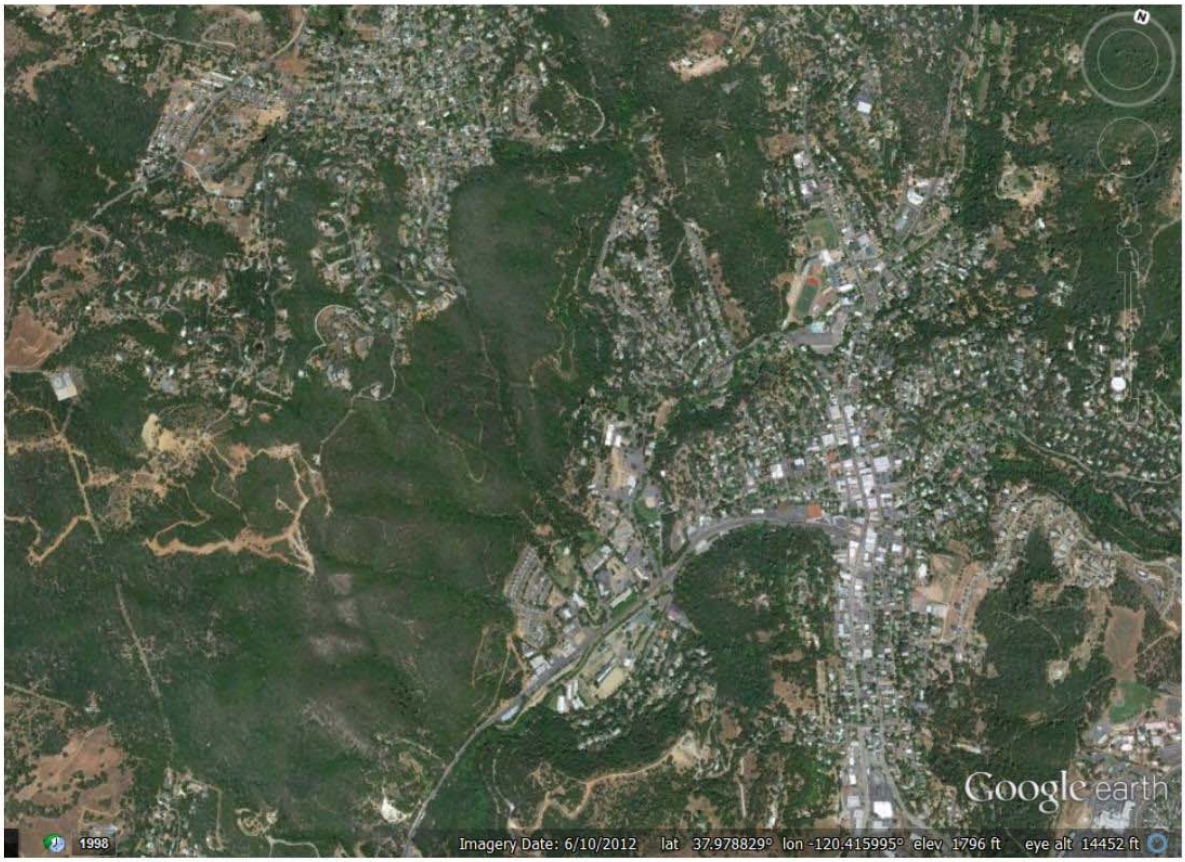
- **Phase 1- Initial Expansion:** This phase consists of a portion of the new trail extending from the existing trail network to a summit.
- **Phase 2**- Main Trail Build-out: this phase includes a portion of the remainder of the trail network, including natural surface trail construction and signage.
- **Phase 3- Amenities and Parking:** The most intensive and costly phase, this will complete build-out of the master plan.

Vicinity Map



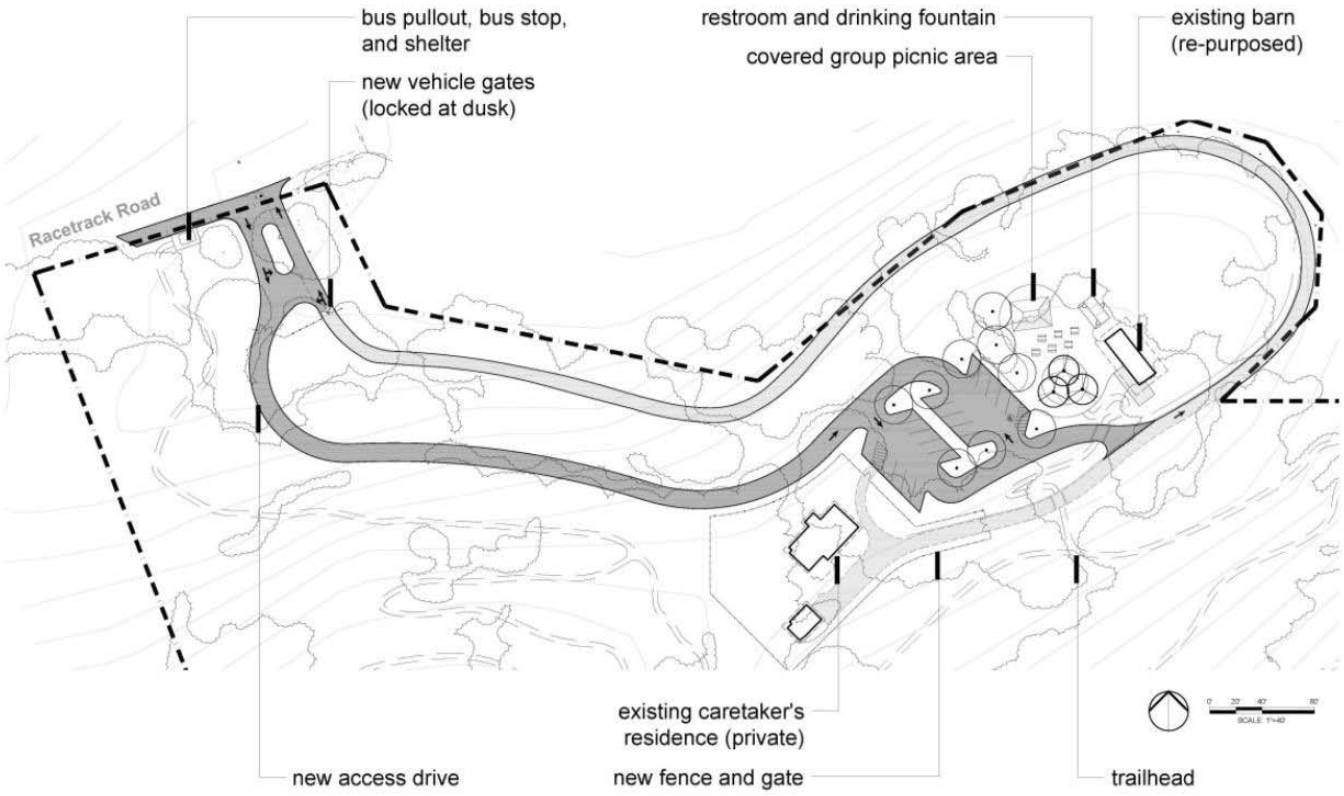
City of Sonora
Dragoon Gulch Trail

Aerial Picture



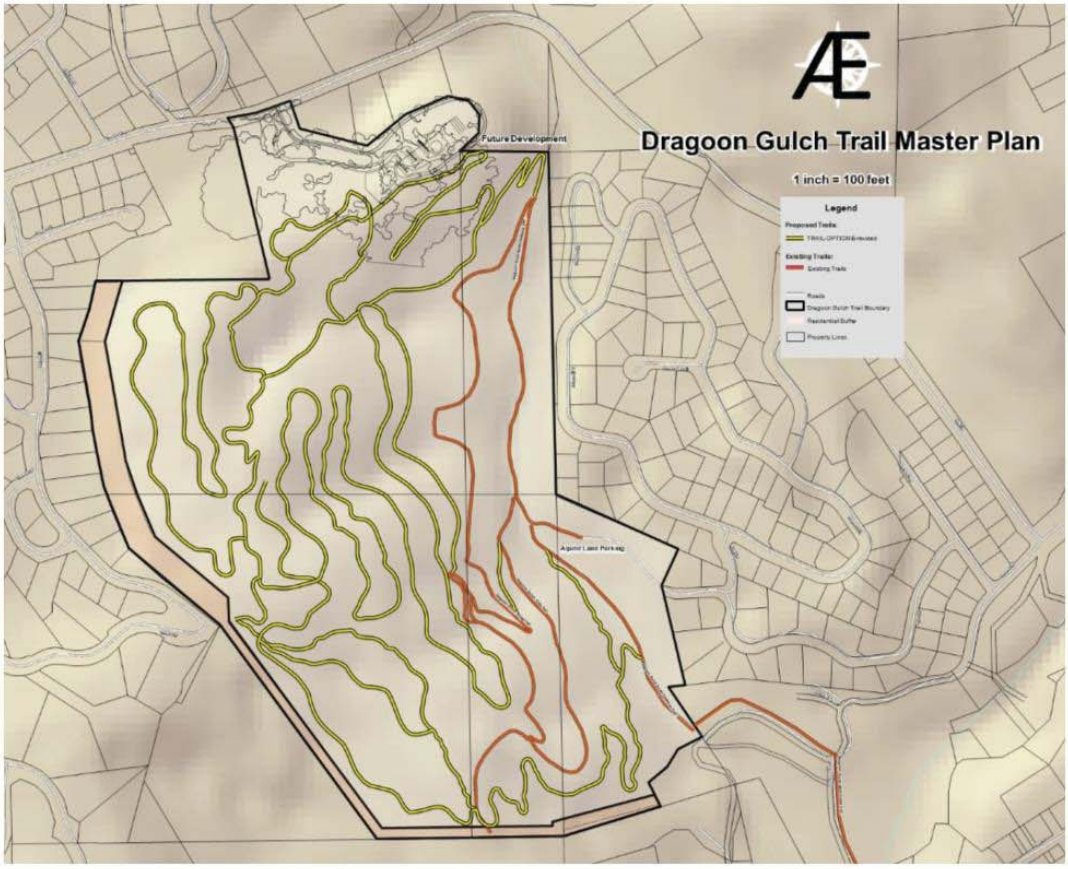
City of Sonora
Dragoon Gulch Trail

Proposed Access and Parking Area



City of Sonora
Dragoon Gulch Trail

Proposed Trail Map



City of Sonora
Dragoon Gulch Trail

e) Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture Resources		Air Quality
	Biological Resources		Cultural Resources		Geology /Soils
	Greenhouse Gas Emissions		Hazards & Hazardous Materials		Hydrology / Water Quality
	Land Use / Planning		Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
	Transportation/Traffic		Utilities / Service Systems		Mandatory Findings of Significance

DETERMINATION:
On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Paula Daneluk

Signature

Nov. 3, 2016

Date

A. Aesthetics –

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

Existing Environmental Conditions:

Visual or aesthetic resources are generally defined as both natural and built features of the landscape that contribute to the public's experience and appreciation of the environment. Aesthetic impact is dependent on the extent to which a project alters both visual character and environmental quality of a project. As mentioned in the Project Description, the currently undeveloped area of Dragoon Gulch Park lies on the westerly side of the Dragoon Gulch ravine. Within the proposed expansion area are some westerly-facing slopes abutting the City/County line at the westerly boundary of the project, however, Dragoon Gulch Trail Area predominately contains easterly-facing slopes. Three distinct summits areas are proposed to offer views of the surrounding area, but are not currently accessible via the existing trail network. The Dragoon Gulch area is densely overgrown with underbrush, primarily Manzanita and poison oak. Oak Woodlands and Oak Chaparral ecotypes predominate the area. Clearing for trail access and fire control would be completed in the First Phase of the project. Fuel removal would be accomplished by thinning and limbing up Manzanita, and by removing dead brush near the trail, with sensitivity to views and preservation of the natural context incorporated into the project in all phases. The existing character of the site would be essentially preserved. As discussed in Section D, Biological Resources, there would be a limited amount of vegetation removed to allow for the construction of the trail network. Only that vegetation in the immediate proximity of the trail would be removed.

As shown in the Aerial Picture, the western boundary of the project is a residential neighborhood along Leland Drive and Rosebud Road. The eastern side is also primarily residential bordered by Dragoon Court and Arbona Circle North. On the southeast side is an existing park entrance off of Alpine Lane. The southern boundary is currently undeveloped. The proposed project designates an 80 foot buffer between the natural surface trails and the neighborhood fence boundaries.

Discussion:

a-b) No Impact:

The proposed project is not located in or near a designated scenic vista, therefore construction

within the existing wooded area of Dragoon Gulch would not have an adverse effect on a scenic vista. According to the California Scenic Highway Mapping System (2011), The Dragoon Recreational Area is not located within a designated state scenic highway; therefore, the trail would not have an impact on scenic resources.

c) Less than Significant Impact:

The proposed project involves the construction of a multi-use trail system and trail head park amenities including trail blazing, construction of an 800 foot driveway, shaded picnic area, bathrooms, and parking lot. The proposed picnic area would be constructed in the current barn location. The existing house would remain and the pens and accessory buildings would be replaced with the planned improvements shown in the proposed Access and Parking figure. However, most of the construction would take place within the existing wooded area and the impact to visual character on the surrounding sites would be less than significant.

d) No Impact:

The project would not involve any permanent above ground lighting sources that would be permanent. It is possible that lighting would be on the site during construction phase of the project; however, this lighting would be temporary.

B. Agricultural Resources –

	Potentially Significant Impact	**Less than Significant Impact with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to no-agricultural use or conversion of forest land to non-forest use?				X

Existing Environmental Conditions:

The proposed project site is located in Tuolumne County and Tuolumne County is not included in the California Department of Conservation's Important Farmland Inventory Series Maps (2010). The topography of the site severely limits the agriculture viability of the site and the site is already owned by the City of Sonora as Open Space for the community.

Discussion:

a - e) No Impact:

The project site is not located in an area with Prime or Unique Farmland or Farmland of Statewide Importance. The site is not under a Williamson Act Contract. In addition, the project site is not in a timberland, rangelands or agricultural area.

C. Air Quality –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?				X

Existing Environmental Conditions:

The project site is located in the City of Sonora within Tuolumne County. At the local level, Tuolumne County Air Pollution Control District (TCAPCD) enforces air quality rules and conducts local air quality planning. The TCAPCD is the agency responsible for implementing emissions standards and other requirements of federal and state laws in Tuolumne County. The TCAPCD is part of the Mountain Counties Air Basin Control Council formed by all member districts by a joint powers agreement which jointly provides for enforcement, engineering, administration, planning and air monitoring as part of an active basin-wide air pollution control program.

Significance thresholds recommended by the TCAPCD have been used to analyze the air quality impact of the Dragoon Gulch Trails Expansion project. The significance thresholds recommended by the TCAPCD state that a project is considered to have a significant impact on air quality if it would result in emissions in excess of the following:

- 1,000 pounds per day (ppd) or 100 tons per year (tpy) of reactive organic gases (ROG),
- 1,000 ppd or 100 tpy of nitrogen oxides (NOx),
- 1,000 ppd or 100 tpy of inhalable particulate matter less than 10 micrometers in diameter (PM10), or
- 1,000 ppd or 100 tpy of carbon monoxide (CO).

Analysis of the amount of emissions associated with the Dragoon Gulch Trails Master Plan project was conducted by KD Anderson and Associates, Inc. They primarily estimated emissions amounts using the CalEEMod emissions model. CalEEMod is a land use emissions computer model designed to provide a platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operation of a variety of land use projects. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The CalEEMod model generates emissions estimates for an annual period, a summer daily period, and a winter daily period. Daily period emissions are the greater of the summer daily period and winter daily period.

The CalEEMod model does not report daily emissions associated with burning of brush piles. Therefore, the emissions for this activity were estimated using information from the U.S. Environmental Protection Agency (EPA) document AP-42 – Compilation of Air Pollutant Emission Factors. More detailed information on AP-42 is available at the EPA internet website http://www.epa.gov/ttn/chief/ap42/index.html.

Discussion:

a & e) No Impact:

The proposed project, which is consistent with the City of Sonora General Plan land use designation, would not conflict with or obstruct implementation of any applicable air quality plan. Additionally, the proposed project is not a use that would cause odors. Therefore, objectionable odors are not anticipated in association with this project and would not have an impact.

b, c) Less Than Significant Impact:

The California Emissions Estimator Model (CalEEMod) was used to predict the proposed project's air emissions. The project would generate construction related emissions from the equipment and possible fugitive dust particulate matter emissions during the construction phase. Below contains the maximum emission estimates for ROG, NO_x, CO, and PM_{10} during construction as

well as the proposed project's construction and daily operational emissions. The project would contribute to air pollutants; however because of the predicted daily emissions are well below the threshold, the impact would be less than significant.

Table 1 Proposed Project Emissions
(pounds per day)

	ROG	CO	NO_x	PM_{10}
Proposed Project Operational Emissions	2.55	17.04	3.24	1.19
Proposed Construction Project Emissions	47.6	25.6	18.7	10
Threshold of Significance	1,000	1,000	1,000	1,000

Source: CalEEMod Emissions Model

d) Less Than Significant:

The project is not located in a residential area; however, there is one residential house on site that is occupied by a facility care-taker. Construction of the parking lot and projected daily use of the proposed project could expose the care-taker residence to pollutants. However, according to the table above, the daily emissions are well below the threshold of significance, therefore, the impact is less than significant.

D. Biological Resources –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Existing Environmental Conditions:

The proposed project is located in the mountainous terrain of the Sierra Nevada Foothills. The proposed project area is located approximately 1,800 feet above mean sea level within the City of Sonora. The average annual rainfall is 33 inches and January typically is the wettest month. The average high for in Sonora is 70ºF with July and August being the hottest months. The average low in Sonora is 42ºF with December and January being the coldest months (City of Sonora).

The site is within portions of Sections 26, 35 and 36 within Township 2 North, Range 14 East of the USGS 7.5-minute Sonora topographic quadrangle. The site is steep wooded hills, consisting of

mixed oak woodlands and chaparral habitats. There is a residential site on a hilltop in the north part of the site, which is accessed by the driveway that crosses over a creek and loops around the east edge of the hill.

A Baseline Biological Resources Assessment was conducted by Moore Biological Consultants on September 29, 2014. The field study consisted of characterization of vegetation communities and habitat conditions, identifying plant and wildlife species, assessing potentially jurisdictional Waters of the U.S. and wetlands, as well as a search for special-status species and their suitable habitat. Trees were also assessed for the potential use by nesting raptors.

The surrounding land uses are primarily residential, with some commercial parcels. Dragoon Gulch bounds the east edge of the park, along with residential neighborhoods. There are also residential neighborhoods to the west. Lands to the south and north of the site are oak woodlands and chaparral habitats, similar to those occurring in the site.

Vegetation

According to Moore Biological Consultants, mixed oak series and Whiteleaf manzanita series best describe the habitat types in the site and adjacent undeveloped lands. Oak Woodlands cover the majority of the site. There are also fairly expansive areas of chaparral, especially in the southwest and west parts of the site. There has been disturbance in parts of the site from historical mining, development from the residential site to the north, vegetation thinning for fire control, and construction and maintenance of fences, trails, and roads.

Live oaks (Quercus wislizenii) are the most common trees throughout the site; black oaks (Quercus kelloggii), valley oaks (Quercus lobata), and blue oaks (Quercus douglasii) are much less common. There are also some foothill pine (Pinus sabiniana), Ponderosa Pine (Pinus ponderosae), and California buckeye (Aesculus californica) interspersed among the oaks. A full list of the plant species observed in the site may be found in the Biological Assessment Appendix A.

The trees on site vary in size, structure, and health. The most notable trees in the site are along the north-facing slope near Race Track Road in the vicinity of the existing and proposed access roads. There is an area of dense chaparral in the southwest corner of the site that is a nearly pure stand of 10 foot high manzanita.

Native and non-native grasses including oats (Avena fatua), foxtail barley (Hordeum murinum), soft chess brome (Bromus hordeaceus), ripgut brome (Bromus diandrus), dogtail (Cynocurus echinatus), and perennial ryegrass (Lolium perenne) and dominate in the understory of the oak woodlands and chaparral. Other grassland soecies such as prickly lettuce (Lactuca serriola), rose clover (Trifolium hirtum), black mustard (brassica nigra), torillis (Toirllis nodose), bull thistle (Cirsium vulgare), vetch (Vicia spp.) and filaree (Erodium botrys) are intermixed with the grasses.

Wildlife

A variety of wildlife species that are common Tuolumne County were observed in the site. Turkey vulture (Cathartes aura), red-tailed hawk (Buteo jamaicensis), acorn woodpecker (Melanerpes formicivorous), northern flicker (Colaptes auratus), American robin (Turdus migratorius), western kingbird (Sialia Mexicana), western scrub jay (Aphelocoma coerulescens), western kingbird

(Tyrannus verticalis), and mourning dove (Zenaida macroura) are some of the common birds observed at the site.

Western gray quirrel (Scurus griseus) and mule (black-tail) deer (Odocoileus hemionus) were the only mammals observed on-site. However, there were signs of coyote (Canis latrans) as well. It is expected that few other mammals use the site as habitat or as a movement corridor. The oak woodlands in the site also provide suitable foraging and/or roosting habitat for a variety of bats.

Based on the habitat types present, along with the absence of perennial or near perennial water throughout the site, only a few species of amphibians and reptiles are expect to occur-on site. Western fence lizard (Sceloporus occidentalis) was the only reptile observed in the site. However, the site is within the range of the Pacific chorus frog (Pseudacris regilla), northern alligator lizard (Gerrhonotus coeruleus), and common garter snake (Thamnophis sirtalis); these and other common amphibian and reptile species may also occur on-site.

Waters of the U.S. and Wetlands

Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, many of their tributaries, and adjacent wetlands. State and federal agencies including CDFW and ACOE, and California Regional Water Quality Control Board have jurisdiction over these habitats. Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE Wetlands Delineation Manual and Regional Supplement (ACOE, 1987; 2008). Waters of the U.S. are drainage features or water bodies as described in 33 CFR 328.4.

Jurisdictional wetlands and Water of the U.S. include, but are not limited to perennial and intermittent creeks and drainages, irrigation canals, lakes, seeps, and springs; emergent wetlands; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

Dragoon Gulch is mapped as an intermittent “blue-line” drainage on the USGS topographic map and is tributary to Woods Creek approximately 0.25 miles southeast of the site. Woods Creek, a perennial drainage, flows generally northeast to southwest to Don Pedro Reservoir several miles southwest of the project site. Don Pedro Reservoir is an impoundment of the Tuolumne River, which is a jurisdictional Water of the U.S. that is navigable further downstream. The tributary relationships of all of the on-site drainages to the Tuolumne River, forms the basis for the on-site creeks being potentially jurisdictional Water of the U.S.

Intermittent Waterways

Two “intermittent” potential jurisdictional Waters of the U.S. were observed in the site, all of which are drainages. Dragoon Gulch flows generally north to south through the east part of the park. An unnamed tributary to Dragoon Gulch flows generally southwest to northeast just south of Race Track Road. These creeks are classified as “intermittent” and the limit of potential ACOE jurisdiction is defined either by the ordinary high water mark along the banks, or by the limits of adjacent wetlands. The widths of the areas vary along the lengths of the creeks, ranging from approximately 10 feet to approximately 80 feet. The width of the creek at the proposed new access road crossing along Race Track Road is approximately 75 feet.

The adjacent wetlands are situated in low floodplain terraces adjacent to the active channels and support hydrophilic plant species such as willows, alders, Fremont cottonwoods, blackberry brambles, wild grape, rabbit's foot grass, umbrella sedge, creeping spikerush, and Bermuda grass.

Ephemeral Waterways

One "ephemeral" tributary to Dragoon Gulch flows generally west to east in the north part of the site. This drainage has poorly defined bed and banks and shows little evidence of surface flows along much of the length, due to three years of drought conditions. This area does not support wetland vegetation. However, it is expected to convey water during heavy rain events, and may support some wetland vegetation during normal rainfall years.

Special-Status Species

Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened species plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies for FESA and pertains to native California species. Both FESA and CESA prohibit unauthorized "take" (i.e., killing) of listed species, with take broadly defined in both acts to include activities such as harassment, pursuit and possession.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning location, communal roosts, and other essential habitat. The federal Migratory Bird Treaty Act and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. Fish and Game Code of California also provides protection for mammals and fish. Table 3 of the Biological Assessment summarizes the listing status and habitat requirements of special-status species that have been documented in the CNDDB (2016) in the greater vicinity of the site. There is no suitable habitat for several other species in Table 3, the site is either above or below the elevation ranges of a few species, and many of these species have very little chance of occurring on-site as they have never been documented nearby. For example, Tuolumne button celery grows in vernal pools and other mesic (i.e., wet) habitats; there are no vernal pools in the site and the drainages provide very low quality habitat for this species. Yellow-lip pansy monkeyflower grows in mesic areas, but only in lower montane coniferous forest and meadows, neither of which are found in the site. The site is at the low end of the elevation range of yellow-lip pansy monkeyflower. The site is also at the low end of the elevation range of Tuolumne fawn lily, and at the very top of the elevation range of Rawhide Hill onion and California vervain. Whipple's monkeyflower (*Mimulus whipplei*) in only know from coniferous forest habitats, has been presumed to be extinct in California for years, and is no longer recognized as a species (CNPS, 2016). The site contains upland woodlands that could not provide suitable habitat for Tuolumne iris. However, the site is in the low end of the elevation range of this species; there is also only one occurrence of this species in the 240 +/- square mile CNDDB (2016) search area.

City of Sonora Tree Policy

Chapter 20.20 of the City's Municipal Code is referred to as the "Tree and Landscape Ordinance of Sonora." According to the ordinance, "Park trees are trees, shrubs, bushes and all other woody vegetation in public parks having individual names and all area owned by the city, or to which the public has free access as a park." The project would likely involve the removal of several trees large enough to qualify as heritage trees per the City's tree policy, especially along the new access road from Racetrack Road.

Discussion:

a,b,c,e) Less Than Significant with Mitigation:

According to the Biological Assessment, neither special-status species, nor federally listed species were found on the proposed project site. Due to the lack of suitable habitats, unusual soils, and regional occurrences, it is unlikely special-status plants occur in the site. Additionally, no special-status wildlife species are expected to occur at or near the site on more than a very occasional or transitory basis. However, special-status bats and birds may roost and/or nest in the site occasion. Additionally, the on-site trees, shrubs, and grasslands may be used by nesting birds protected by the Migratory Bird Treaty and Fish and Wildlife Code of California, therefore, the impact would be less than significant with the mitigation measures listed below.

The project would likely involve the removal of several trees on site in order to build the proposed trails and new access road. Development of the network of trails, the new access road and parking lot area will result in the conversion of a few acres of oak woodland habitat to recreational uses. Similar oak woodlands occur throughout the west slope of the Sierra Nevada in Tuolumne County and numerous other counties. This loss of a small area of oak woodland habitat is viewed as a less than significant impact. Therefore, the mitigation measures below would reduce the impact to less than significant.

The proposed project would involve unavoidable construction impacts to wetland vegetation and would require consultation with the appropriate jurisdiction such as USACOE, RWQCB, and CDFG. Temporary impacts would be mitigated in order to restore the affected area to pre-construction conditions in accordance with permits issued by the USACOE, RWQCB, and CDFG. With the following mitigation measures, the impact would be less than significant.

Biological Mitigation Measure I: Vegetation removal shall be scheduled between September 1 and January 31. If vegetation removal occurs outside of those dates, a pre-construction nesting bird survey shall be conducted by a qualified biologist. If active nests are found a qualified biologist shall mark the nest location and identify an appropriate setback between the nest and construction activities.
Timing: Prior to Construction
Enforcement/Monitoring: City of Sonora City Community Development Director

Biological Mitigation Measure II: Tree removal shall occur when daytime temperatures are 50° F or higher to ensure bats are active and can abandon any potential roots as disturbance from the clearing activities occurs. Additionally, tree removal shall occur between mid-November through early-March to decrease the probability of occupancy of the site by bats.

Timing: Prior to Construction
Enforcement/Monitoring: City of Sonora City Community Development Director

Biological Mitigation Measure III: For every heritage tree removed along the new access road from Racetrack Road, three, 15 gallon trees, shall be required to be planted or a fee of $225 shall be paid for each tree removed.
Timing: Prior to and during construction
Enforcement/Monitoring: City of Sonora City Community Development Director

Biological Mitigation Measure IV: Permits from ACOE, CDFW, and RWQCB should be secured prior to the placement of any fill material within potential jurisdictional Waters of the U.S. The only project impacts to potential jurisdictional Waters of the U.S. appear to be related to the construction of the new access road from Racetrack Road across an unnamed tributary to Dragoon Gulch, and two trail crossings of the second unnamed tributary to Dragoon Gulch. The City should implement all permit conditions and mitigation measures related to the protection of sensitive aquatic habitats and species.
Timing: Prior to construction
Enforcement/Monitoring: City of Sonora City Community Development Director

d, f) No Impact:

The project does not interfere substantially with the movement of any native, or established native, resident or migratory wildlife species or native wildlife nursery sites. The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan since these plans do not exist.

E. Cultural Resources –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		
e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resource Code 21074?		X		

Existing Environmental Conditions:

A Cultural Resources Inventory and Evaluation was conducted by Ric Windmiller Consulting Archeologist in October, 2014. The purpose of the study was to provide cultural resources inventory and evaluation of cultural resources. Efforts to identify cultural resources included a records search by the Central California Information Center, California Historical Resources Information System; a sacred lands file search by the Native American Heritage Commission; a review of historic maps and literature review of published and unpublished sources on local prehistory, ethnography, archaeology, and history and; a pedestrian field inspection.

The Area of Potential Effect (APE) for cultural resources would be the proposed trail routes, the existing access road and a second proposed new road that would connect Racetrack Road with the proposed 20-stall parking area at the proposed new trailhead. Therefore, the APE includes the existing building at 11291 Racetrack Road and the area of proposed parking, picnicking and related facilities at the new trailhead.

Five historic archaeological sites were identified within the defined APE. Four buildings 50 years old or older were also identified within the APE. No Native American cultural resources were identified during the study (Windmiller, 2014). The criteria of eligibility for the National Register of Historic Places, California Register of Historical Resources and for unique archaeological resources as defined in the California Environmental Quality Act's Guidelines were applied to the cultural resources identified during the study. As a result, no historic properties eligible for the National Register, historical resources eligible for the California Register or unique archaeological resources were identified.

Discussion:

a–d) Less Than Significant with Mitigation:

According to Windmiller Consulting Archeologist, the criteria of eligibility for the National Register of Historic Places, California Register of Historical resources, and for unique archaeological resources as defined in CEQA were applied to the cultural resources identified during the study. As a result, no historic properties eligible for the National Register, historical resources eligible for the California Register or unique archaeological resources were identified in the assessment (Windmiller, 2014). However, while no historic properties, historic resources or unique archeological resources were identified during the study, it is probable that significant historic or prehistoric archaeological resources may be encountered when clearing the trail routes of brush that have not already been cleared or during ground disturbing activities. Therefore, the following mitigation measures would reduce any potential impact to less than significant.

Cultural Resources Mitigation Measure I: An archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric and historic archaeology shall monitor site after the brush clearing and prior to ground disturbing activities and, in the event of any find(s), shall present alternatives to avoid and/or mitigate any adverse effects.
Timing: During trail clearing
Enforcement/Monitoring: City of Sonora Community Development Director

Cultural Resources Mitigation Measure II: In the unlikely event of the accidental discovery or recognition of any human remains, there shall be no further excavation or disturbance of the field or any nearby area reasonably suspected to overlie adjacent human remains, until compliance with applicable laws and regulations has occurred. If any remains are determined to be Native American, then the guidelines of the Native American Heritage Commission would be adhered to in the treatment and disposition of the remains.
Timing: During construction
Enforcement/Monitoring: City of Sonora Community Development Director

e) No Impact:

According to the Cultural Resources Inventory Report, Windmiller Consulting sent a letter and a map depicting the project vicinity to the NAHC in West Sacramento, asking the commission to review the sacred land files for any Native American cultural resources that might be affected by the project. The request to the NAHC seeks to identify any Native American cultural resources within or adjacent to the project area. A list of Native American individuals who might have information or concerns about the project was also requested. On October 6, 2014, NAHC Staff, informed Windmiller Consulting that a review of the sacred lands file failed to indicate the presence of native American cultural resources in the "immediate project area".

The City sent AB52 letters to tribes who requested to be notified of proposed project on October 2, 2016. The letters provided a summary of the project and requested information regarding comments or concerns the Native American community might have about the project. No response from the tribes was received within 30 days of receipt of AB52 notification letter from the City. Therefore, no TCRs have been identified within or near the project area, and there would be no impact.

F. Geology and Soils –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS—Would the Project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong Seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on - or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X	

Existing Environmental Conditions:

Tuolumne County is located within an area of relatively low seismic activity. The project site is not located with the Alquist Priolo Earthquake Zone. According to the *Fault Activity Map of California* (2010), closest fault to the project site is approximately four miles away to the southwest near New Melones Lake. The fault is classified as a Late Quaternary Fault with the last displacement 700,000 years ago (2010). The project site contains Calaveras Complex (Pzcc) rock. Although no active faults are located in the vicinity of the project site, the project area still has potential effect of ground motion from regional faults.

The various rocks that Pzcc comprises accumulated in the subduction zone of the Sierra Nevada's and consist of black and green slate, schist, and greenstone. Greenstone is dense, reddish brown-orange silty sand that is normally highly fractured and rippable by heavy equipment (Bungalows-Woods Creek Landing, 2003).

Discharge wastewater must conform to the Regional Water Quality Control Board's (RWQCB) applicable standards. California Water Code section 13282 allows RWQCBs to authorize a local public agency to issue permits "to ensure that systems are adequately designed, located, sized, spaced, constructed and maintained. According to the Sonora General Plan private septic systems are regulated through the Tuolumne County Environmental Health Department. The site currently has a single family residential structure served by a septic tank.

Discussion:

a (i-iv) , c, d) Less than Significant:

The project site is not located within the Alquist Priolo Earthquake Zone. Therefore, this proposed project site does not pose any seismic safety risks and the impact is less than significant. The trail would be built along the natural topography of the site and no part of the trail would exceed a slope of 15%. Landslides are unlikely to occur on the project site because landslides are most likely on slopes greater than 30% when triggered by an earthquake. Due to the soil types on the project site and the distance from the nearest active fault line, the impact is less than significant.

b) Less than Significant:

According to Siegfried Engineering (2014), the placement of the parking lot is not topographically ideal from a storm water mitigation standpoint, however, there are several factors contributing to the proposed location. Primarily, the parking lot would be accessible through the use of an existing driveway; therefore additional environmental impact would be avoided. Secondly, the location has already been roughly graded and trampled as a horse or animal corral, avoiding further environmental impact. Thirdly, there is a lack of vegetation that would otherwise be disturbed and lastly, it is unlikely that there are any cultural resources in that location.

The use of multiuse trails would compact and stabilize the trail surface, which would decrease erosion. In addition, minimal grading is proposed; therefore, trailblazing would result in minimal rates of deposition, erosion, or siltation. Following mitigation measures would mitigate the impact to less than significant erosion.

Geology and Soil Mitigation Measures I: BMPs will be used in order to avoid environmental damage due to erosion.
Timing: During Construction
Enforcement/Monitoring: City of Sonora City Engineer

Geology and Soil Mitigation Measures II: Water quality swales will be incorporated into the grading plans when soil disturbance is adjacent to water ways or wetlands.
Timing: Incorporated into Design Plans
Enforcement/Monitoring: City of Sonora City Engineer

Geology and Soil Mitigation Measures III: The drainage along the access road shall connect to the Tuolumne County's drainage ditches along Racetrack Road.
Timing: During Construction
Enforcement/Monitoring: City of Sonora City Engineer

e) Less than Significant:

The project proposes a prefabricated restroom with a pre-cast 2,000 gallon septic tank at the trailhead off Racetrack Road. Thin soils and porous rock (e.g. limestone) are two identified hazards associated with failed septic systems within the city's sphere of influence. However, age has been the primary reason for septic system failure within the city according to the Tuolumne County Environmental Health Department. The age of the proposed septic tank would be a non-issue and the soil is a dense greenstone, therefore the impact would be less than significant.

G. GREENHOUSE GAS EMISSIONS –

	Potentially Significant Impact	**Less than Significant Impact with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
VII. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				X
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

Environmental Conditions:

Greenhouse gas (GHG) thresholds used to analyze construction emissions and daily operational emissions of the Dragoon Gulch Trail Expansion project were developed by the California Air Pollution Control Officers Association (CAPCOA).

The CAPCOA document *CEQA & Climate Change – Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* presents a 900 metric ton per year (MT/yr) of CO2e screening threshold. The CAPCOA threshold is considered a conservative threshold set at a level to "capture" or define 90 percent of land use development projects as significant. The CAPCOA document notes,

"A single quantitative threshold was developed in order to ensure capture of 90

> percent or more of likely future discretionary developments. The objective was to set the emission threshold low enough to capture a substantial fraction of future residential and nonresidential development that will be constructed to accommodate future statewide population and job growth, while setting the emission threshold high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions."

Therefore, if the proposed project would generate more than 900 MT/yr of CO2e, the project is considered to have a significant impact on global climate change. If the project would generate 900 MT/yr of CO2e or less, the project is considered to have a less- than-significant impact on global climate change.

Discussion:

a-b) No Impact:

A minor amount of greenhouse gas (GHG) emissions related to the project would result from the running of construction equipment and daily operations after construction is complete. GHG impacts resulting from the proposed project would not contribute to any cumulatively significant impacts. Construction of the Dragoon Gulch Trail Expansion project would result in 110.15 MT/yr of CO2e of construction related emissions. Operational emissions could potentially result in 243.06 MT/yr of CO2e. This amount combined is less than 900 MT/yr, therefore this impact is considered less than significant.

H. Hazards and Hazardous Materials –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

Existing Environmental Conditions:

Materials and waste may be considered hazardous if they are poisonous (toxicity), can be ignited by open flame (ignitability), corrode other materials (corrosivity), or react violently, explode or

generate vapors when mixed with water (reactivity). According to the State of California Health and Safety Code, Chapter 6.95, Section 25501(o), the term "hazardous material" is defined in law as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment. In some cases past uses can result in spills or leaks of hazardous materials to the ground, resulting in soil and groundwater contamination. The use, storage, transportation and disposal of hazardous materials are subject to numerous federal, State and local laws and regulations.

Information about hazardous materials sites in the project area was collected by conducting a review of the California Environmental Protections Agency's (CalEPA) Cortese List Data Resources and the State Water Resources Control Board's GeoTracker list. The Cortese List includes data resources that provide information regarding the facilities or sites identified as meeting the Cortese List requirements. The Cortese List is updated at annually, in compliance with California regulations (California Code Section 65964.6(a)(4)) and includes federal superfund sites, state response sites, non-operating hazardous waste sites, voluntary cleanup sites, and school cleanup sites. The GeoTracker list shows Underground Storage Tanks (UST).

Based on the review of the Cortese List conducted on May 12, 2014, there are 19 sites located within ¼ miles of the proposed project site. Majority of these sites currently hold permits with the Tuolumne County Division for storage of hazardous materials and medical waste. Ten sites were once listed as Leaking Underground Storage Tank (LUST) sites, but the cases have since been closed. There are currently two sites listed as an open LUST sites with the CVRWQCB.

The proposed project site is in the City of Sonora which is currently listed as a Very High Fire Hazard Severity Zone according to CAL Fire. The City of Sonora Fire Department, Tuolumne County Fire Department and CAL FIRE all maintain facilities with the city limits. The Sonora Fire Department is responsible for fire suppression and prevention within the city limits, including wildlands. The Department not only responds to issues within the city limits, but maintains an automatic aid agreement with all fire agencies within a five-mile radius of the city.

Discussion:

a – g) No impact:

The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The project does not involve hazardous emissions or hazardous material within one-quarter mile of an existing or proposed school as there are no schools in the immediate vicinity of the project. The site is not located on a list of hazardous materials sites (EDR, 2014). The project would not impair implementation of an emergency response plan or evacuation plan. The project is not located within two miles of a public use airport. There would be no impact.

h) Less than Significant Impact:

The proposed project site is located in the City of Sonora which is located within CAL Fire's Very High Fire Hazard Severity Zone. The fire department is located at 201 S Shepherd Street, approximately 1.6 miles southeast of the project site and has an average response time of 3.6 minutes. However, no new residences would be constructed, and access in and out of the wildland area would be improved with the construction of a new driveway. Additionally, trails will be cleared initially for trail building and then with regular maintenance resulting in a reduction of fuel load within a wildland area. The impact would be less than significant.

H. Hydrology and Water Quality –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?				X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?				X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

Existing Environmental Conditions:

Three potential jurisdictional waters of the US were observed on the site, all of which are drainages. Dragoon Gulch, the recreational area's namesake, is a seasonal waterway, with headwaters approximately 2,000 feet north of Racetrack Road which creates the northern boundary of the existing recreational area. An unnamed tributary to Dragoon Gulch flows generally southwest to northeast just south of Racetrack Road. This tributary and Dragoon Gulch appear to flow approximately on foot deep during rain events. The third potential jurisdictional waters of the US is a very small ephemeral tributary to Dragoon Gulch that flows generally west to east in the north part of the site. Dragoon Gulch flows generally north to south through the east part of the park which is currently developed. Currently, there are water lines on site providing water to the existing residence. Water lines would be connected to the existing lines to provide water to the drinking fountains and bathrooms.

Discussion:

a – b & f – j) No Impact:

The build-out of the Dragoon Gulch Recreational Area would not impact water quality or discharge pollutants into the water system. The project would not alter the course of any stream or river and minimal erosion or siltation on or off-site is expected with the construction. Best management practices would be used when constructing crossings to prevent erosion and siltation. The project does not involve placement of housing with the 100-year flood hazard and is not located on a parcel within the 100-year flood hazard. There are no large bodies of water within the area that would pose a seiche or tsunami hazard or physical/geological features resulting in a mudflow hazard. There would be no impact to waste discharge, ground water, or flooding.

c - e) Less Than Significant Impact:

The proposed project would result in the addition of a limited amount of new pavement to previously unpaved areas for the new access road and parking area. The overall size of the site is 67 acres an 800-foot driveway and associated parking lot, would be the only paved surfaces generating runoff from impermeable surfaces. Additional sources of polluted runoff would not be generated by project. The runoff from these surfaces would be less than significant.

I. Land Use and Planning -

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Existing Environmental Conditions:

The proposed project consists of expanding an existing trail system through the Dragoon Gulch Recreation Area, which is owned and operated by the City of Sonora. The existing site is deemed Open Space and the ultimate build-out of the trail system would provide additional points of access creating more connectivity throughout the community.

Discussion:

a – c) No Impact:

The proposed project is within an existing recreational area; therefore, it would not physically divide an established community. The project does not conflict with any local plans for the purpose of avoiding or mitigating environmental impact, nor is there a habitat conservation plan or natural community conservation plan in this area. There would be no impact.

J. Mineral Resources –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Existing Environmental Conditions:

According to the Sonora General Plan, the City of Sonora has several mineral classifications. However, according the General Plan the proposed project site is not located in an area of state designated minerals. Economic feasibility of small mining sites and lack of mineral classification on the site prevents the site from being a viable mining site.

Discussion:

a – b) No Impact:

According to the City of Sonora's General Plan Land Use Designation Map 2020, Dragoon Gulch Recreation Area is located in a Park/Recreation/Open Space area. The proposed project site is not designated within a potential mining area; therefore, there would be no impact to mineral resources from the proposed project.

K. Noise –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Existing Environmental Conditions:

Some land uses are considered more sensitive to noise than others, due to the amount of noise exposure and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks, and outdoor recreation areas are generally considered more sensitive to noise than are commercial and industrial land uses. Sensitive receptors in the project area include the Sonora High School (approximately 1 mile from the proposed project site), the Seventh Day Adventist school and church, and the residences on the north, east and west side of the project site.

The project proposes a multi-use trail and staging area facilities. Potential project noise would be generated from trail users, which may include noise from the recreation staging area, maintenance and storage buildings, and picnic areas. While the project may result in a permanent increase in the ambient noise levels above existing level, the increase would not be substantial due to the limited size of the impacted area and the type of proposed activity. As indicated above, the project would not expose existing or planned noise sensitive areas in the vicinity to a substantial permanent increase in noise levels.

According to The City of Sonora General Plan Noise Element, construction noises are transient and would be temporary in nature.

Discussion:

a- d) Less than Significant:

The project would not generate noise that would permanently increase the noise levels above the established standards for the City and would not expose people to potentially significant noise levels that exceed the allowable limits of the Sonora General Plan and other applicable standards. Most of the ambient noise in the project vicinity is generated by recreational users of the park and is limited to conversations between people, therefore, the project implementation is not expected to expose people residing or working in the project area to excessive noise levels.

The project does not propose any major, new or expanded infrastructure such as mass transit, highways or major roadways or intensive extractive industry that could generate excessive groundborne vibration or groundborne noise levels on-site or in the surrounding area. However, during construction of the project, groundborne vibration and noise levels would temporarily increase because of the construction equipment used while building the driveway and parking lot. Large construction equipment would not be used while expanding the trail system. There would be a less than significant impact.

e, f) No Impact:

The closest airport to the proposed project site is approximately four (4) miles north in the town of Columbia; therefore, the project would not expose people residing or working in the project area to excessive airport-related noise levels. There would be no impact associated with airports or related airport noise.

L. Population and Housing –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Existing Environmental Conditions:

The proposed project involves expanding the trail network of the Dragoon Gulch Recreational Area and the construction of a paved driveway, parking lot and staging area. The proposed project site is located within the City of Sonora boundaries. Currently there is a resident caretaker facility on site that will remain intact. No additional housing is proposed.

Discussion:

a-c) No Impact:

The proposed project would not induce population growth in the City directly with new homes or businesses or indirectly through the extension of roads or infrastructure that were not already addressed in the General Plan. Therefore, there is no impact to existing houses or people, nor does the proposed project necessitate construction of replacement housing elsewhere.

M. Public Services –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES:				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i).Fire protection?			X	
ii). Police protection?			X	
iii). Schools?				X
iv). Parks?			X	
v). Other public facilities?			X	

Existing Environmental Conditions:

The project site is currently within the Sonora Fire Department jurisdiction, which has primary responsibility for fire prevention, inspection and protection. The Fire Department is located at 201 S Shepherd Street, approximately 1.6 miles southeast of the project site. Police protection is the responsibility of the Sonora Police Department since the project is located within the City of Sonora. The Police Department is located at 100 S Green Street, 1.5 miles southeast of the project site. The Sonora School District governs elementary and middle schools in the City of Sonora. The Sonora Union High School District also governs nursery, middle, and adult schools within the City of Sonora.

Discussion:

i, ii, iv, v) Less Than Significant Impact:

The proposed 67 acre build-out of the Dragoon Gulch Recreation Area would provide additional access to the recreation area through the new driveway which would allow for traffic to flow in and out without turning around. According to the Dragoon Gulch Master Plan, proximity and access to recreational areas is a key factor in the health of communities. The project would be a designed park facilities and would provide a new regional hiking facility for walkers, hikers, cyclists, bird watchers, and nature lovers from the local region. The development of the trail network would include fuel management with reduction of underbrush and downed vegetation in the vicinity of the trails. The proposed project would provide needed recreational facilities to the region. The impact to police and fire protection would be less than significant.

iii) No Impact:

The project proposes a trail expansion in a designated recreation area and does not involve the creation of new housing or facilitate population growth, therefore would not be an impact on schools. However, the plan would include connections to and from adjacent neighborhoods and Sonora High School, providing healthy transportation options.

N. Recreation –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. RECREATION --				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?		X		

Existing Environmental Conditions:

There are several parks, recreation trails, and public use facilities in the City of Sonora. They range from children's playgrounds to historical mining equipment to the existing 35 acre portion of Dragoon Gulch Recreational Area. The existing Dragoon Gulch Recreational Area is a trail system creating a 2 ½ mile loop throughout oak woodlands, eventually leading to a look-out vista of the surrounding mountain ranges. The remaining 67 acres of the recreation area are undeveloped with the exception of the care takers facility.

Discussion:

a) No Impact

The proposed 67 acre build-out of the Dragoon Gulch Recreation Area would have a beneficial impact to park facilities since the proposed project would be adding trails to the City's trail system. The surface of the trails would be natural surface trails, totaling approximately 7 miles of trail in a 100 acre area. As an expansion of the existing trial system, the proposed project would provide new recreational facilities to the city. There would be no impact to other city recreational facilities.

***b) Less than Significant Impact with Mitigation Incorporated*:**

The proposed project involves new recreational facilities including a new paved driveway, parking lot and staging area, restrooms, a picnic area with shade structures and a multi-use trail system. As discussed in this document, the proposed improvements would expand the city's recreational facilities. Mitigation measures for this recreational project are discussed in the corresponding sections of this document and reduce the impacts to less than significant.

O. Transportation/Traffic -

	Potentially Significant Impact	**Less than Significant Impact with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		X		
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X	

Existing Environmental Conditions:

The Dragoon Gulch Trails Project is located on the western edge of the City of Sonora. Route 49, Snell Street, Race Track Road, Forest Road and Jamestown Road are the primary streets serving the western Sonora area. The existing trail head is located off Alpine Road, a local street that is connected to the larger arterial collector system such as Calaveras Way, Bonanza Road, Spring Hill Road and Arbona Circle. These streets are generally 22-24 feet wide. Without sidewalks or on-street parking.

The proposed project includes access to Racetrack Road, which is a Tuolumne County maintained rural minor collector street that connects Jamestown Road to the west with Snell Street and downtown Sonora to the east. Race Track Road is 18-22 feet wide with no shoulders and a posted speed limit of 25 mph. Pedestrian and bicycle access to the site would be available via the same roadways that provide vehicle access although there is no dedicated pedestrian or bicycle facilities along Race Track Road.

Site distance from the site along Racetrack Road to the west is clear for 400 feet to the Bay Meadows Drive intersection where the road curves. While Racetrack Road is straight to the east, site distance is impaired by trees in the orchard on the adjoining lot. Access to the site from Racetrack Road is currently provided by a single lane residential driveway that winds up to serve the caretaker's facility. The existing trail system is accessed via Alpine Road parking/trailhead.

Existing Traffic Conditions:

The Tuolumne County Transportation Council (TCTC) has developed Level of Service (LOS) thresholds for roadway segments that have been adopted by Tuolumne County and the City of Sonora for environmental evaluation. According to the 2007 Regional Transportation Plan (RTP), classifications of LOS range from A (best) to F (worst). LOS B is typical on minor collector and local roadways, except within one-half mile of major collectors or arterial highways where the standard shall be LOS C. According to these thresholds, Race Track Road operates at LOS B on weekday and weekends.

This proposed project is expanding an existing trail system, including a new access point. Therefore, the traffic study calculated trip generation rates based on observation of current traffic activity the existing trail head and parking spot at Alpine Road in proportion to the size of the use. Additionally, the study conducted evaluated the project's safety impacts to Race Track Road based on the following three issues: Is sight distance at this location adequate? Does the amount of traffic anticipated justify a separate left turn lane? Are measures needed to facilitate pedestrian or bicycle access?

According to traffic study conducted in September 2014 by KD Anderson and Associates; Transportation Engineers, Race Track Road carried 3,463 vehicles on a Friday and 2,766 vehicles on a Saturday. Additionally, existing daily traffic volume counts of the existing trail access point revealed 90 vehicle trips (i.e. ½ inbound and ½ outbound) on Friday, September 5th and 87 trips on Saturday, September 6th. The highest volume hour on Friday occurred from 8:15-9:15 a.m. On Saturday the traffic was dispersed and the highest volume hour occurred from 4:30-5:30p.m.

Discussion:

a, f) Less Than Significant Impact:

The proposed project is expected to add a combined total of 221 daily trips on a weekday at both the Alpine Road and Race Track Road trail heads. It is projected that there would be 49 and 32 trips occurring during the a.m. and p.m. peak hours, respectively, with 54 trips in the highest volume hour. On Saturday the project is expected to generate 214 daily trips, with 25 trips generated during the a.m. peak hour and 35 trips occurring during the p.m. peak hour.

While the project could add a small amount of traffic to Alpine Lane and other local streets serving the existing trailhead, it is projected that the project would likely add less than 100 daily trips which would not have an appreciable effect on the quality of traffic flow or safety in this area. Projected volume of traffic under long term conditions would not be appreciably different from that occurring today and in fact may be less due to the effects of major regional circulation system improvements. Therefore, the project would not cause a substantial traffic load and the impact would be less than significant.

Currently, at the Alpine Road trail head there is a small parking lot able to accommodate up to 8 vehicles. With the proposed trail expansion and parking lot there would be 20 additional parking spaces at the Race Track Road access point. The parking is considered adequate due to the amount of existing and expected traffic. During the highest volume hour, on the highest volume day of the week, there were 22 trips (½ inbound and ½ outbound) made. Therefore, it can be concluded that approximately 11 vehicles arrived during an hour. Due to the nature of the use, visitors to the park are not expected to stay more than 2-3 hours. Therefore, with 28 parking spaces proposed in total, there would be a less than significant impact to parking.

b, c, e) No Impact:

According to the traffic study, a "worse case" assessment of impacts along Race Track Road was performed assuming 100% of the project trips used the new trailhead and drive in one direction on Race Track Road. Under those assumptions, Race Track Road would still operate at LOS B under existing plus project conditions. Therefore, the project would not exceed a level of service standard nor have an impact to emergency services. Additionally, the closest airport to the proposed project site is approximately four (4) miles north in the town of Columbia, therefore, this project would not have an impact on air traffic patterns.

d) Less Than Significant With Mitigation:

As mentioned above there were three criteria under which safety was evaluated in the traffic report; sight distance, left turn channelization, and bicycle and pedestrian safety. The available sight distance on Race Track Road, at the proposed access point of the project was measured from the location as mandated under the CalTrans Highway Design Manual (HDM). While the view alignment on Race Track Road is straight to the east, the view is blocked by trees in the orchard on the adjoining lot. It will be necessary to remove/trim some of the trees to the east of the project access to provide sight that is in compliance with Tuolumne County standards for 25 mph.

The American Association of State Transportation and Highway Officials (AASHTO) has identified guidelines for the installation of left turn lanes in their publication *A Policy on Geometric Design of Highways and Streets.* The need for a left turn lane is based on the volume of traffic on the mainline road and the relative percentage of the traffic that turns left. To determine whether a left turn lane would be required for the proposed project, peak hour traffic volume on Race Track Road was identified (i.e., 4:30 p.m. - 5:30 p.m.: 129 eastbound and 189 westbound vehicles). It was then assumed that 100% of the inbound traffic generated during the peak hour of the generator (i.e., 22 vehicles) would turn left into the site. It was found that left turns would represent 10% of the advancing volume and this combination of advancing and opposing traffic falls well below the threshold that would justify a left turn lane, therefore, the impact is less than significant.

Traffic Mitigation Measure I: Remove/trim trees to the east of the project access on Racetrack to provide sight that is in compliance with Tuolumne County standards for 25 mph.
Timing: During construction
Enforcement/Monitoring: City of Sonora City Engineer

g) Less Than Significant:

Currently, Race Track Road lacks facilities to accommodate pedestrians and bicyclists. While it is unlikely that an appreciable number of pedestrians or bicyclists would be attracted to the site via Race Track Road, those who elected to use these modes would face the existing limitations relating to available shoulders and obstructions. While construction of compete pedestrian and bicycle facilities as envisioned in the Tuolumne County Bikeways and Trails Plan is not justified as a project specific mitigation, it would be appropriate for Tuolumne County to review the conditions of shoulders in this area and act to remove obstructions within the right of way. However, due to the low amount of pedestrian and bicycle traffic the impact would be less than significant.

P. Tribal Cultural Resources –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Tribal Cultural Resources – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with the cultural value to a California Native American Tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or				X
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				X

Discussion:

a) No Impact:

The City of Sonora sent AB52 letters to tribes who requested to be notified of proposed projects on October 2, 2016. The City of Sonora as CEQA Lead Agency has complied with subdivision (d) of Public Resources Code Section 21080.3.1 as the California Native American tribes contacted failed to request consultation within 30 days of receipt of the City's notice. Therefore, no impact to tribal cultural resources would occur.

Q. Utilities and Service Systems –

	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Existing Environmental Conditions:

Water quality within Sonora is regulated by the State Regional Water Quality Control Board's Central Valley Region 5. The City's primary water source is public water supplied by the Tuolumne Utilities District (TUD). TUD maintains three water storage facilities within or adjacent to the city limits. TUD also provides public sewer service to the majority of the city. Currently, there is an existing waterline at the site that supplies the caretaker's residence. There are no sewer lines into the proposed project site.

Discussion:

a, c, e) No Impact:

The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board because no new sewer connections are anticipated with this project.

As discussed below, the project would be served with a septic tank and not connect to the public sewer system.

The storm drainage of the site would be incorporated in the construction of the trails to maintain the natural flow and mitigation measures for drainage have been previously discussed in the Geology and Soils Section. Therefore, there would be no impact to storm water drainage facilities which could cause environmental effects.

b, d, f, g) Less Than Significant Impact:

The project would require an extension of the existing water line to accommodate additional water for the restrooms and drinking fountains. There is an existing line at the caretaker's residence and the waterline would be extended to serve the proposed bathrooms and drinking fountains. The new facilities on site would have a minimal amount of trash associated with them. For example, there would be trash cans in the restrooms and at the picnic site; therefore, there is sufficient landfill permitted capacity to accommodate the project's solid waste disposal needs. The project would include a pre-cast 2000 gallon septic tank on site to provide the necessary wastewater service. All material would be disposed of in compliance with federal, state and local regulations; the impact would be less than significant.

MANDATORY FINDINGS OF SIGNIFICANCE --

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE --				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

Discussion:

a) Less than Significant With Mitigation Incorporated:

As discussed in the Biological Resources, Cultural Resources, Geology and Soils, and Traffic sections of this Initial Study/Mitigated Negative Declaration (IS/MND), the project would result in potentially significant temporary impacts as a result of construction that would have the potential to degrade the quality of the environment. However, adoption and implementation of mitigation measures described in the sections noted above would reduce these individual impacts to less than significant levels.

b) Less than Significant:

For natural resource topics, there would be no cumulative effects because no resources would be adversely affected, or the project effects would be localized and of limited extent. Similarly, the project would involve minimal hazardous materials use, the risks of which are site-specific, construction related and are extensively regulated, and do not combine with similar effects resulting in a cumulative effect.

The Proposed project would not induce population growth or result in the development of new housing or employment-generating uses; therefore, it would not combine with cumulative development to create a cumulative effect related to increased demand for services or utilities, the expansion of which could result in significant environmental effects. Therefore, the impacts are considered less than significant.

c) Less than Significant:

There would be no significant adverse effects to human beings. There would be a less than significant increase in operational air emissions. For all other topics, there would be no impact, a less than significant impact or impacts are considered less than significant with mitigation incorporated. Therefore, impacts, both direct and indirect, to human beings are considered less than significant.

REPORT PREPARERS

Paula M. Daneluk, Principal Planner
Brinn Langdale, Assistant Planner

REFERENCES

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MOORE BIOLOGICAL CONSULTANTS

September 29, 2016

Ms. Paula M. Daneluk, AICP
Development Impact
5050 Laguna Boulevard, Suite 112-613
Elk Grove, California 95758

Subject: BIOLOGICAL ASSESSMENT: "DRAGOON GULCH TRAILS" PROJECT, SONORA, CALIFORNIA

Dear Paula:

On behalf of the City of Sonora, thank you for asking Moore Biological Consultants to conduct a biological assessment of the "Dragoon Gulch Trail" project site in Sonora, in Tuolumne County, California (Figures 1 and 2). The work involved reviewing databases and available documents, conducting field surveys to document habitats and existing biological resources present in the site, and searching the site for potentially jurisdictional Waters of the U.S. or wetlands, and suitable habitat for or presence of special-status species. This report details the methodology and results of our investigation.

Project Overview

The proposed project is to complete the build-out of the 102+/- acre Dragoon Gulch Recreational Area, which is owned and operated by the City of Sonora. Approximately 35 acres were previously developed with a network of four (4) foot wide natural surface trails and the proposed plan would extend the existing trail system throughout the remaining 67 acres. The proposed trail system would be built as a multi-use trail for pedestrians and cyclists.

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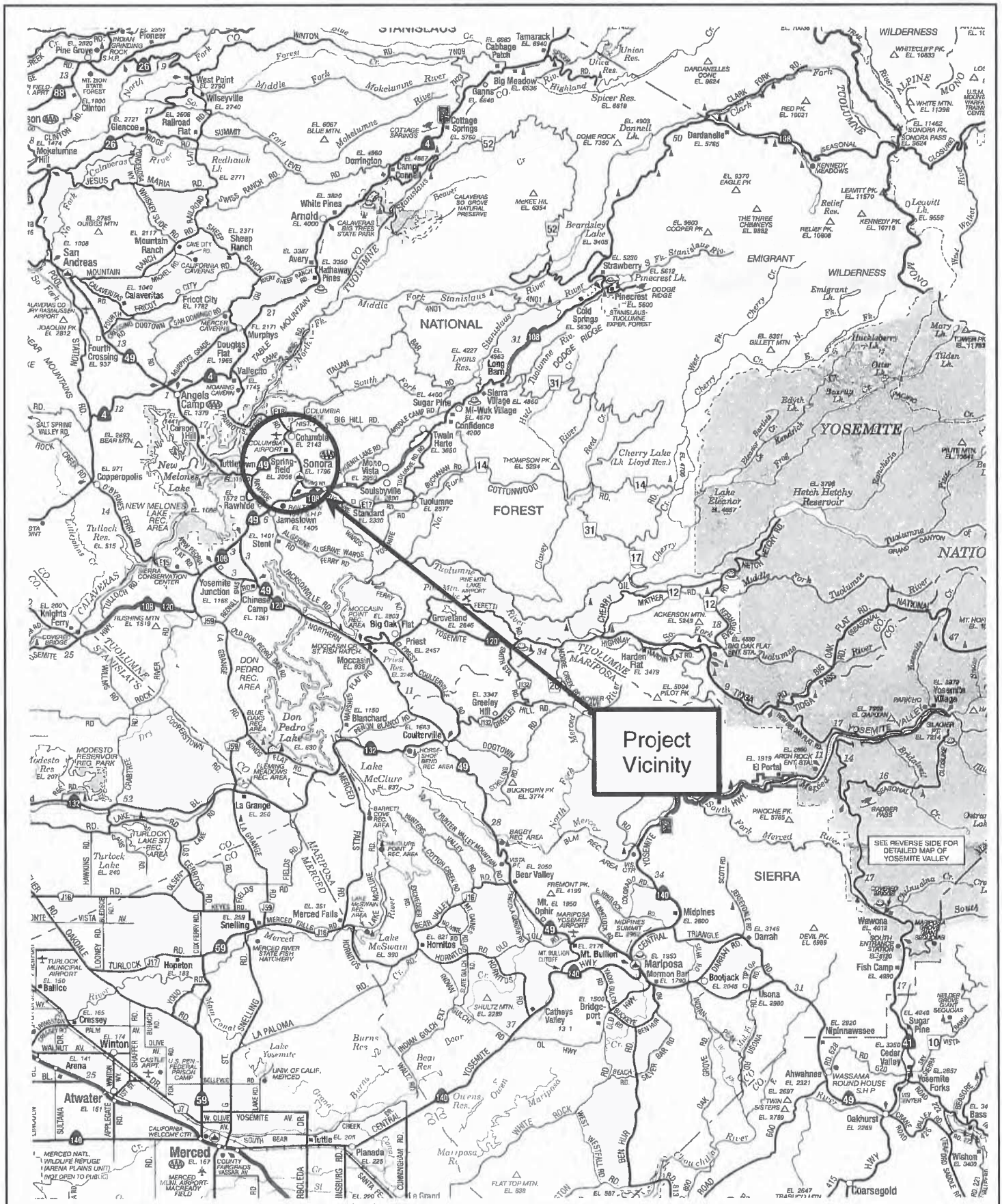


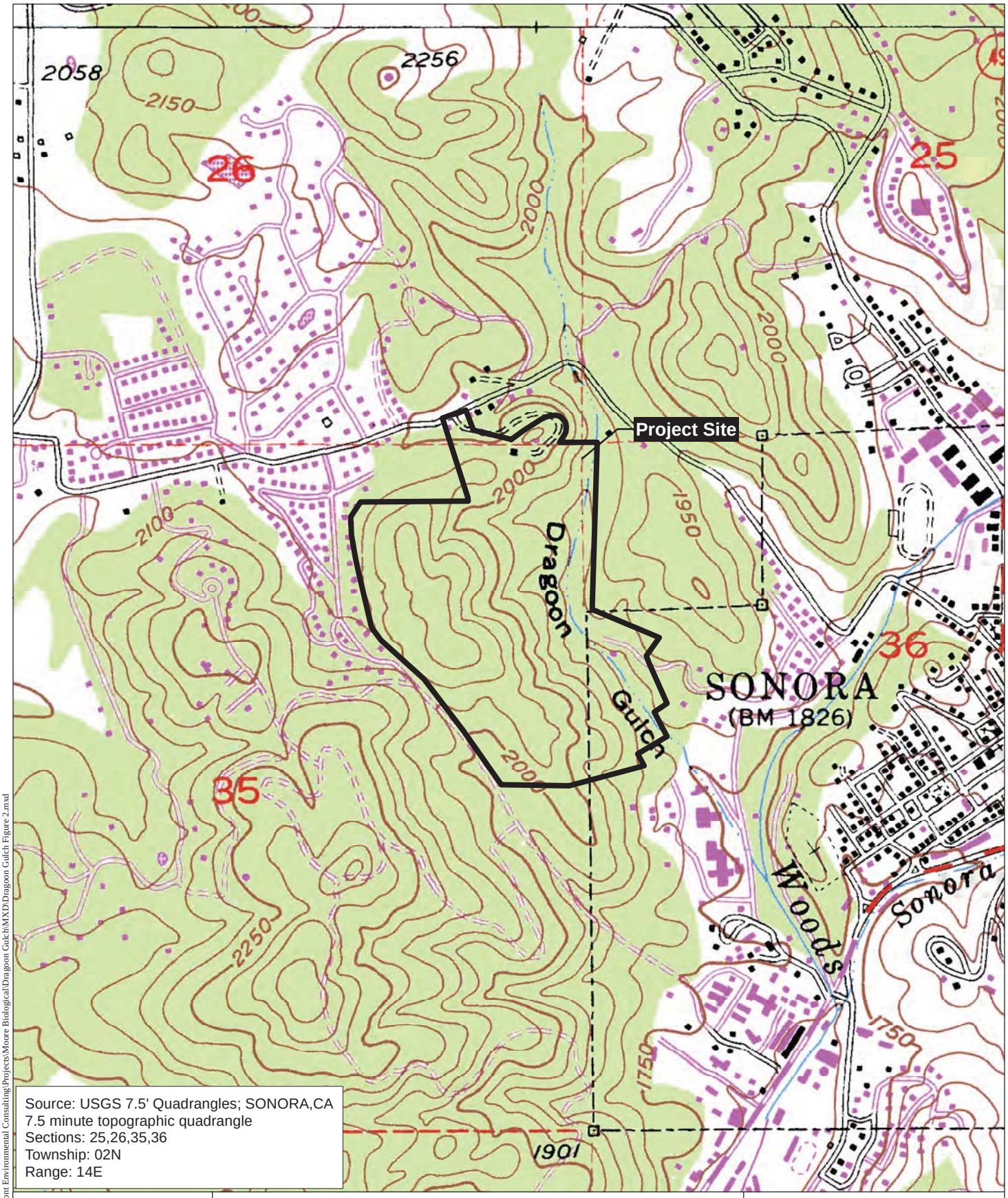
Moore Biological Consultants

0 18 Miles

N W E S

FIGURE 1

PROJECT VICINITY



Source: USGS 7.5' Quadrangles; SONORA,CA
7.5 minute topographic quadrangle
Sections: 25,26,35,36
Township: 02N
Range: 14E

Figure 2

Moore Biological Consultants

0 500 1,000

1 inch = 1,000 feet

N W E S

Map Date: November 2014

PROJECT LOCATION

Dragoon Gulch

Tuolumne County, CA

C:\Users\MattP\Documents\Fremont Environmental Consulting\Projects\Moore Biological\Dragoon Gulch\MXD\Dragoon Gulch Figure 2.mxd

As shown in the Proposed Trail Map in Attachment A, the proposed trail network would transverse the entire Dragoon Gulch Park Area. A variety of trails will be built, including relatively steep trails in some parts of the park, and relatively gentler trails in other areas, providing a variety of recreational opportunities. There is an accessible route to a “Vista and Interpretive Area” proposed in the northwest part of the site. Construction of the trails will result in slope disturbance above and below the trail to varying degrees. Experienced trail builders or supervision by experienced trail builders would be utilized to create trails with Best Management Practices.

The project site is also densely overgrown with underbrush, primarily manzanita and poison oak. Clearing for trail access and fire control would be completed in the initial phase of the project. Fuel removal would be accomplished by thinning and limbing up manzanita, and by removing dead brush near the trail, though sensitivity to views and preservation of the natural context would be incorporated into the project in all phases. There will be an 80+/- foot buffer between the new natural surface trails and the neighborhood fences of the existing residences to the west of the site. Setbacks from seasonal waterways and historical or natural resources would also be incorporated during the build-out of the project.

To accommodate trail expansion, a new approximately 20-stall parking lot with other amenities such as a bathroom area and picnic area are proposed adjacent to the current caretaker's residence. The proposed parking lot would be situated on a previously cleared horse coral, and would use the existing paved driveway for egress. Another roadway would be constructed, as shown in the Amenities Exhibit (Attachment A), to allow for single-lane ingress to the site. Adjacent to the proposed parking lot, the build-out would include a pre-manufactured public restroom that would be approximately 160 square feet and include a drinking fountain, a group picnic area with an overhead structure and picnic tables, as well as demonstration planting areas. The existing barn may be re-purposed to include storage or other activities.

The existing driveway entrance off Racetrack Road would be expanded to a two-way driveway, and may ultimately include a pull-out lane and/or bus pull-out and pad with a transit shelter. These improvements may require a Right-of-way dedication to the County to facilitate the ultimate street section, and would be setback accordingly. The driveway entrance would include a median to preserve existing trees and allow turn-around movements prior to the gates that would control vehicle access to the rest of the property. A new paved driveway, approximately 800 feet long and 12 feet wide, will provide access to the new parking lot. Construction for this access would require grading a new bench in the existing slope above the existing driveway, and may include short sections of gabion retaining structure, no greater than six (6) feet high (four (4) feet exposed), to minimize the extent of the impacted area. The existing driveway and proposed access and parking lot would support small passenger vehicles and trucks, but would not support school buses, trailers, or other longer wheel-based vehicles.

The proposed project designates a significant portion of the trails to meet accessible codes to provide access to users of all abilities. The accessible portion of the trails includes a summit opportunity and a path with a less than 5% grade to a public right-of-way along Racetrack Road. Rest areas (minimum five (5) feet X five (5) feet wide) would be provided at 200 feet maximum intervals along the accessible trail sections to allow for passing and intermittent stops. Benches would be ultimately provided at intervals no greater than 600 feet. One new accessible parking stall would provided within the proposed 20-stall parking lot. An accessible path of travel would be provided to all facilities, include the restroom, drinking fountain, picnic area, and trailhead.

The project will likely develop in phases over a few years, depending on the availability of funds. An initial phase will likely include construction of only a portion of the new trail system extending from the existing trail network to a few vista points; the remainder of the trail network may be completed in two or more subsequent phases. Construction of the Amenities and Parking area in the

north part of the park is the most intensive and costly phase, completing the build-out of the master plan, and will likely be the final phase of construction.

Regulatory Setting

California Environmental Quality Act: With respect to biological resources, the California Environmental Quality Act (CEQA) Guidelines Section 15206 specifies that a project shall be deemed to be of statewide, regional, or area wide significance if it would substantially affect sensitive wildlife habitats, including but not limited to riparian lands, wetlands, bays, estuaries, marshes, and habitats for rare and endangered species.

CEQA Guidelines Section 15380 provides that a species not listed under the FESA or CESA may be considered rare or endangered under specific criteria. These criteria have been modeled after the definitions in FESA and CESA. Section 15380 was included in the CEQA Guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a candidate species that has not yet been listed by either USFWS or CDFW. Thus, Section 15380 provides an agency with the ability to protect a species from a project's potential impacts until the respective resource agencies have had an opportunity to designate the species as protected, if warranted.

An example would be the vascular plants listed as rare or endangered by the California Native Plant Society (CNPS), but which may have no designated status or protection under FESA or CESA. The CNPS created five lists:

- List 1A: Plants presumed extinct in California,
- List 1B: Plants rare, threatened, or endangered in California and elsewhere,
- List 2: Plants rare, threatened, or endangered in California, but more

numerous elsewhere,

- List 3: Plants about which more information is needed; a “review list”, and
- List 4: Plants of limited distribution; a “watch list”.

In general, plants appearing on CNPS List 1A, 1B, or 2 are considered to meet the criteria of Section 15380.

Clean Water Act: The Clean Water Act (CWA) (33 U.S.C. 1251-1376) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 404 of the CWA established a permit program administered by the U.S. Army Corps of Engineers (ACOE) regulating the discharge of dredged or fill material into waters of the United States (including wetlands). Implementing regulations by ACOE are found at 33 CFR Parts 320-330. Guidelines for implementation are referred to as the Section 404 (b)(1) Guidelines and were developed by the Environmental Protection Agency (EPA) in conjunction with ACOE (40 CFR Parts 230). The Guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, their tributaries, and adjacent wetlands. The U.S. Environmental Protection Agency (EPA) and ACOE published their Final Rule on the definition of Waters of the U.S. in June 2015 (80 CFR 124: 37054-37127). The Final Rule was intended to replace all prior rules and guidance on the definition as used in implementing the Clean Water Act and became effective on August 28, 2015. However, the Final Rule was stayed nationwide shortly thereafter, with a Sixth Circuit Court ruling on October 9, 2015.

State and federal agencies regulate Waters of the U.S. and wetlands, and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into any waters of the U.S., including

wetlands. California Department of Fish and Wildlife (CDFW) also has jurisdiction over modifications to rivers, lakes, and streams under Section 1600 of Fish and Game Code of California.

"Waters of the U.S.", as defined in 33 CFR 328.4, encompasses Territorial Seas, Tidal Waters, and Non-Tidal Waters; Non-Tidal Waters includes interstate and intrastate rivers and streams, as well as their tributaries. The limit of federal jurisdiction of Non-Tidal Waters of the U.S. extends to the "ordinary high water mark". The ordinary high water mark is established by physical characteristics such as a natural water line impressed on the bank, presence of shelves, destruction of terrestrial vegetation, or the presence of litter and debris.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

Section 401 of the CWA requires an applicant for a Federal license or permit that allows activities resulting in a discharge to waters of the U.S., to obtain a state certification that the discharge complies with other provisions of the CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California.

Porter-Cologne Water Quality Control Act: Under the Porter-Cologne Water Quality Control Act, "Waters of the State" fall under the jurisdiction of the State Water Resource Control Board (SWRCB) and California Regional Water Quality Control Boards (RWQCBs). The RWQCBs are required to prepare and periodically update water quality control basin plans, which set forth water quality standards for surface water and groundwater, as well as actions to control non-point and point sources of pollution to achieve and maintain these standards.

Projects that affect Waters of the State may also be required to meet waste discharge requirements (WDRs) of the RWQCBs. SWRCB's Resolution 2008-0026 identified a need to protect Waters of the State that are not subject to CWA Section 404 permitting and associated CWA Section 401 Water Quality Certification. In 2013, the SWRCB issued a Revised Draft Wetland and Riparian Area Protection Policy (WRAPP) for informational purposes, including authorization procedures for dredge and fill discharges to Waters of the State. Once adopted, the Central Valley Regional Water Quality Board is expected to develop a program requiring WDRs for the fill of isolated wetlands that not subject to CWA Section 404 that authorize the impacts by issuing WDRs or in some cases, a WDR waiver.

Section 1600 of the Fish and Game Code: Under Section 1600 of the Fish and Game Code of California, project proponents are required to notify CDFW prior to initiating activities for any project that would divert water from, or obstruct or change the natural flow, bed, channel, or bank of any river, stream, or lake. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement.

Federal Endangered Species Act: The Federal Endangered Species Act (FESA) of 1973 (16 U.S.C. 1531-1543) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend.

Section 7 of FESA requires Federal agencies, in consultation with and with the assistance of the Secretary of the Interior or the Secretary of Commerce, as appropriate, to insure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) share responsibilities for administering the Act.

Regulations governing interagency cooperation under Section 7 are found at 50 CFR Part 402. The opinions issued at the conclusion of consultation include statements authorizing take that may occur incidental to an otherwise legal activity.

California Endangered Species Act: The California Endangered Species Act (CESA) (Fish and Game Code 2050 et seq.) establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that State agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species, if reasonable and prudent alternatives are available that would avoid jeopardy. CESA requires State lead agencies to consult with the during the California Environmental Quality Act **(**CEQA) process to avoid jeopardy to threatened or endangered species. As an outcome of consultation, CDFW is required to issue a written finding indicating if a project would jeopardize threatened or endangered species and specifying reasonable and prudent alternatives that would avoid jeopardy. The Act provides for joint consultations when species are listed by both the State and Federal governments.

Migratory Bird Treaty Act: The Migratory Bird Treaty Act (MBTA) (16 USC, Section 703-711; 40 Stat. 755), as amended, prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act applies to whole birds, parts of birds, and bird nests and eggs. The MBTA does not provide protection for habitat of migratory birds, but does prohibit the destruction or possession of individual birds, eggs, or nest in active use without a permit from USFWS.

Section 3503 of the Fish and Game Code: Section 3503 of the Fish and Game Code prohibits unlawful take, possession or needless destruction of the nest or eggs of any bird. Section 3503.5 of the Fish and Game Code states that it is “unlawful to take, possess, or destroy any birds-of-prey in the orders Falconiformes or Strigiformes . . .” (i.e., hawks, owls, eagles, and falcons). The

loss of an active nest is considered a violation of this code by CDFW. This statute does not provide for the issuance of any type of incidental take permit.

Methods

Prior to the field surveys, we conducted a search of CDFW's California Natural Diversity Database (CNDDB, 2014); an updated search was conducted in 2016. The CNDDB search included the USGS 7.5-minute Sonora, Standard, Columbia SE, and Columbia topographic quadrangles, which encompass approximately 240 square miles surrounding the project site. The United States Fish and Wildlife Service (USFWS) IPac Trust Report of Federally Threatened and Endangered species that may occur in or be affected by projects in the project vicinity was also reviewed (Attachment B). This information was used to identify special-status wildlife and plant species that have been previously documented in the vicinity or have the potential to occur based on suitable habitat and geographical distribution. The USFWS on-line maps of designated critical habitat were also reviewed.

A field survey was conducted on September 29, 2014. The survey was accomplished by walking throughout the park in the area of the proposed trails and the new access road. The new access road and the majority of the trail segments depicted in blue on the Trail Map (Attachment A) had been flagged and minimally cleared to provide access. Locating the future trail alignments in some areas was challenging due to thick brush and steep slopes and GPS equipment was used to verify location.

The field survey involved characterization of vegetation communities and habitat conditions, noting surrounding land uses, and identifying plant and wildlife species. The site was assessed for potentially jurisdictional Waters of the U.S. and wetlands as defined by ACOE, (1987; 2008), and a search for special-status species, and potentially suitable habitat for special-status species (e.g., vernal

pools, blue elderberry shrubs, cliffs, caves, areas with unique soils). Additionally, trees in and near the site were assessed for the potential use by bats, nesting raptors, and other nesting birds.

Results

The 102+/- acre Dragoon Gulch Recreational Area is in Sonora, in Tuolumne County, California (Figure 1). The site is within portions of Sections 26, 35 and 36 within Township 2 North, Range 14 East of the USGS 7.5-minute Sonora topographic quadrangle (Figure 2). The site is steep wooded hills and is at elevations of approximately 1,800 to 2,150 feet above mean sea level. The site consists of mixed oak woodlands and chaparral habitats (Figure 3). There is a home site on a hilltop in the north part of the site, which is accessed by a driveway that crosses over a creek and loops around the east edge of the hill.

Surrounding land uses are primarily residential, with some commercial parcels. Dragoon Gulch bounds the east edge of the park; there are residential neighborhoods to the east of the gulch. There are also residential neighborhoods west of the site. Lands to the south and north of the site are oak woodland and chaparral habitats, similar to those occurring in the site.

VEGETATION: Mixed oak series and Whiteleaf manzanita series (Sawyer and Keeler-Wolf, 1995) best describe the habitat types in the site and adjacent undeveloped lands (Figure 3 and photographs in Attachment C). Oak woodlands cover the majority of the site; there are also some fairly expansive areas of chaparral, especially in the southwest and west parts of the site. There has been disturbance in parts of the site from historical mining, the home site in the north part of the site, vegetation thinning for fire suppression, and construction and maintenance of fences, trails, and roads.

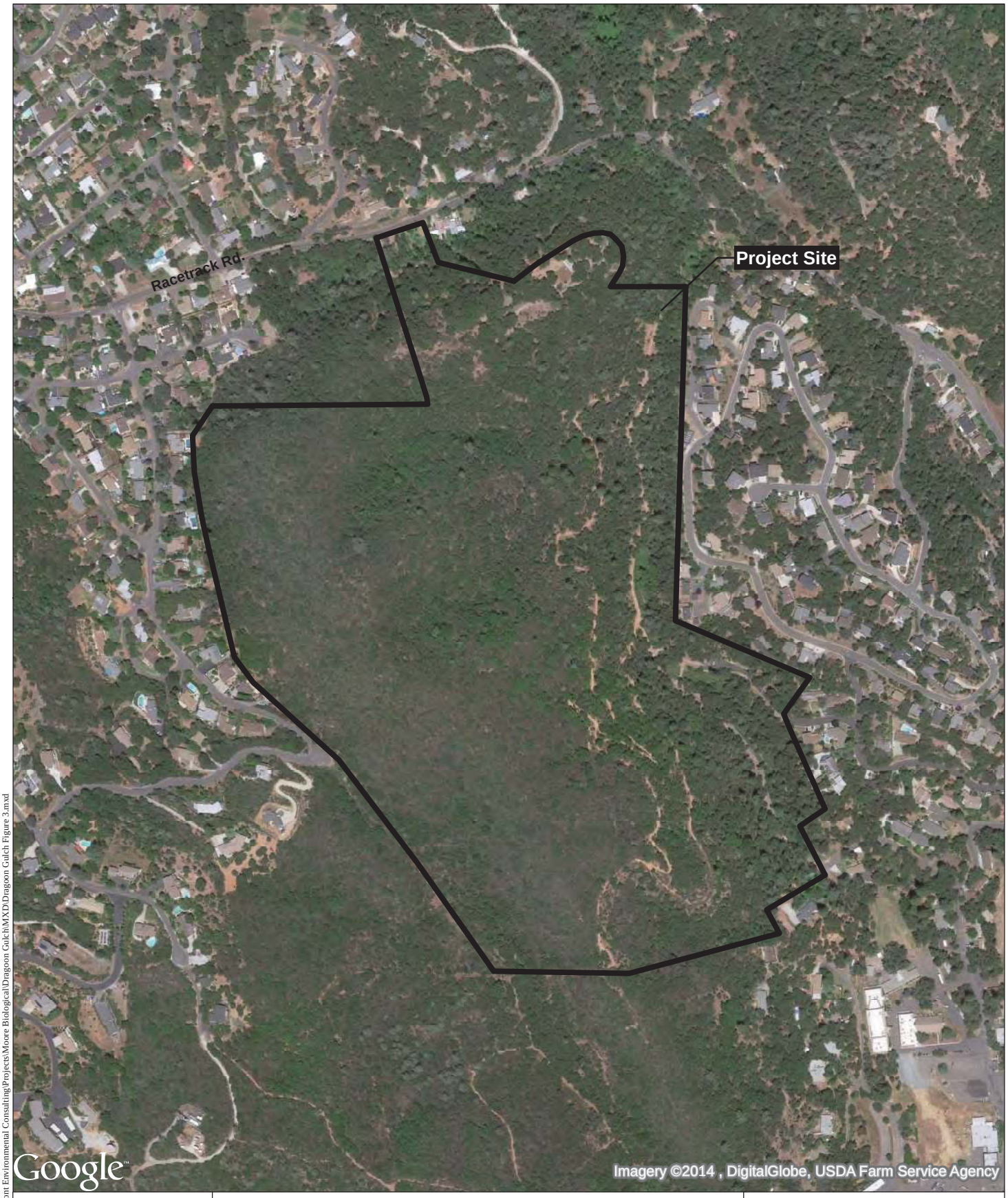


Figure 3

Moore Biological Consultants

0 250 500

1 inch = 500 feet

N W E S

Map Date: November 2014
Aerial Photo: Google Earth 2014

AERIAL

Dragoon Gulch

Tuolumne County, CA

C:\Users\MattP\Documents\Fremont Environmental Consulting\Projects\Moore Biological\Dragoon Gulch\MXD\Dragoon Gulch Figure 3.mxd

Live oaks (*Quercus wislizenii*) are the most common trees throughout the site; black oaks (*Quercus kelloggii*), valley oaks (*Quercus lobata*), and blue oaks (*Quercus douglasii*) are much less common. There are also some foothill pine (*Pinus sabiniana*), Ponderosa pine (*Pinus ponderosae*), and California buckeye (*Aesculus californica*) interspersed among the oaks. Table 1 is a list of plant species observed in the site.

The trees in the site vary in size, structure, and health Many of the oak trees have multiple stems, with most of the stems being 12+/- inches in diameter at breast height (DBH) (see photographs in Attachment C). There are lesser numbers of relatively larger single-trunk oaks. Some oaks apparent in aerial photographs taken a few years ago have died in the past few years; some of these dead trees have fallen. There are also some standing dead oaks (snags) remaining, a few of which appear to have died in the past few years, possibly from the drought.The most notable trees in the site are along a north-facing slope near Race Track Road in the vicinity of the existing and proposed access roads (see photographs in Attachment C).

The oak woodland understory is fairly dense in most places, supporting scrub oak (*Quercus berberdifolia*), buckbrush (*Ceanothus cuneatus*), toyon (*Heteromeles arbutifolia*), redbud (*Cercis occidentailis*), chamise (*Adenostoma fasciculatum*), and manzanita (*Arctostaphylos* ssp.) shrubs. Poison oak (*Toxicodendron diversilobum*) is very dense in some areas and widespread throughout the site. There are also some patches of California wild rose (*Rosa californica*). No blue elderberry (*Sambucus mexicana*) shrubs were observed in or adjacent to the site.

Whiteleaf manzanita (*Arctostaphylos viscida*), common manzanita (*Arctostaphylos manzanita*), buck brush, and chamise are dominant shrubs in the chaparral habitats in the site. There is an area of dense chaparral in the southwest corner of the site that is a nearly pure stand of 10+ foot high manzanita and a few widely scattered trees (see photographs in Attachment C).

TABLE 1

PLANT SPECIES OBSERVED IN THE SITE

Achillea millefolium	yarrow
Adenostoma fasciculatum	chamise
Aesculus californica	California buckeye
Ailanthus altissima	tree-of-heaven
Alnus rhombifolia	white alder
Amsinckia menziesii	fiddleneck
Arctostaphylos manzanita	common manzanita
Arctostaphylos viscida	whiteleaf manzanita
Avena sp.	oat
Brassica nigra	black mustard
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft chess brome
Ceanothus cuneatus	buck brush
Centaurea solstitialis	yellow star-thistle
Cercis occidentailis	western redbud
Cirsium vulgare	bull thistle
Convolvulus arvensis	field bindweed
Cynodon dactylon	Bermuda grass
Cynosurus echinatus	dogtail
Cyperus eragrostis	umbrella
Eleocharis macrostachya	creeping spikerush
Eremocarpus setigerus	dove weed
Erodium botrys	filaree
Gallium sp.	bedstraw
Heteromeles arbutifolia	toyon
Hordeum murinum	foxtail barley
Lactuca serriola	prickly lettuce
Lolium perenne	perennial ryegrass
Medicago polymorpha	California bur clover

TABLE 1 (Continued)

PLANT SPECIES OBSERVED IN THE SITE

Navarretia pubescens	hairy navarretia
Quercus berberdifolia	scrub oak
Quercus douglasii	blue oak
Quercus kelloggii	black oak
Quercus lobata	valley oak
Quercus wislizenii	interior live oak
Pentagramma triangularis	goldback fern
Pinus ponderosae	Ponderosa pine
Pinus sabiniana	foothill pine
Polypogon monspeliensis	rabbit's foot grass
Populus fremontii	Fremont cottonwood
Raphanus sativus	wild radish
Rosa californica	California wild rose
Rubus discolor	Himalayan blackberry
Salix exigua	narrow-leaved willow
Salix gooddingii	black willow
Salix lasiolepis	arroyo willow
Torilis nodosa	torilis
Toxicodendron diversilobum	poison oak
Trifolium hirtum	rose clover
Vicia sativa	common vetch
Vitis californica	California wild grape

There are no areas within the site that would be classified as "chaparral". The shrubs in the site are understory species within the oak woodlands. No chaparral habitats with open rocky areas and/or unusual soils with potential to support special-status chaparral plant species known from the greater project vicinity were observed in the site.

Dominant trees in the riparian habitats along Dragoon Gulch and an unnamed drainage near Race Track Road include Fremont cottonwood (*Populus fremontii*), white alder (*Alnus rhombifolia*), arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), and narrow-leaved willow (*Salix exigua*). California wild grape (*Vitis californica*) vines and Himalayan blackberry (*Rubus discolor*) brambles, and California wild rose bramble also occur along the drainages.

Native and non-native grasses including oats (*Avena fatua*), foxtail barley (*Hordeum murinum*), soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), dogtail (*Cynosurus echinatus*), and perennial ryegrass (*Lolium perenne*) are dominant in the understory of the oak woodlands and chaparral. Other grassland species such as prickly lettuce (*Lactuca serriola*), rose clover (*Trifolium hirtum*), black mustard (*Brassica nigra*), rose clover (*Trifolium hirtum*), torilis (*Toirilis nodosa*), bull thistle (*Cirsium vulgare*), vetch (*Vicia* spp.), and filaree (*Erodium botrys*) are intermixed with the grasses.

WILDLIFE: A variety of wildlife species that are common in Tuolumne County were observed in the site. Turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), acorn woodpecker (*Melanerpes formicivorous*), northern flicker (*Colaptes auratus*), American robin (*Turdus migratorius*), western bluebird (*Sialia mexicana*), western scrub jay (*Aphelocoma coerulescens*), western kingbird (*Tyrannus verticalis*), and mourning dove (*Zenaida macroura*) are some of the more common birds observed at the site (Table 2).

Several old raptor stick nests and other smaller bird nests were observed in the trees and shrubs in the site. The 2014 survey was conducted after the end of the avian nesting season and no active nests were located in the site. Given the presence of numerous oaks and other large trees throughout the site, it is considered likely that one or more pairs of raptors, plus a variety of songbirds, nest in trees and shrubs in the site each year. A variety of other protected migratory birds (mostly songbirds) likely nest in the on-site shrubs and grasslands during most years.

TABLE 2

WILDLIFE SPECIES DOCUMENTED IN THE SITE

Birds	
Turkey vulture	*Cathartes aura*
Red-tailed hawk	*Buteo jamaicensis*
American kestrel	*Falco sparverius*
Mourning dove	*Zenaida macroura*
Acorn woodpecker	*Melanerpes formicivorus*
Northern flicker	*Colaptes auratus*
Wild turkey	*Meleagris gallopavo*
Black phoebe	*Sayornis nigricans*
Western kingbird	*Tyrannus verticalis*
Western scrub jay	*Aphelocoma coerulescens*
American crow	*Corvus brachyrhynchos*
Western bluebird	*Sialia mexicana*
American robin	*Turdus migratorius*
Rufous-sided towhee	*Pipilo erythropthalmus*
White-crowned sparrow	*Zonotrichia leucophrys*
Dark-eyed junco	*Junco hyemalis*
Brewer's blackbird	*Euphagus cyanocephalus*
American goldfinch	*Carduelis tristis*
House finch	*Carpodacus mexicanus*
Mammals	
Western gray squirrel	*Sciurus griseus*
Mule deer	*Odocoileus hemionus columbianus*
Reptiles	
Western fence lizard	*Sceloporus occidentalis*

Western gray squirrel (*Sciurus griseus*) and mule (black-tail) deer (*Odocoileus hemionus*) were the only mammals observed in the site; sign of coyote (*Canis latrans*) was also observed. While none were observed, a few other mammals are expected to use habitats in or move through the site on occasion. Black-tailed hare (*Lepus californicus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), desert cottontail (*Sylvilagus audubonii*), and California ground squirrel (*Spermophilus beecheyi*) are expected to occur in the area. Mountain lions (*Felis concolor*) and bobcats (*Felis rufus*) are known to exist in the low Sierra Nevada foothills and may occur in the area; however, no evidence of either of these species was observed during the recent survey. A number of species of small rodents including mice (*Mus musculus, Reithrodontomys megalotis,* and *Peromyscus maniculatus*) and voles (*Microtus californicus*) also likely occur. The oak woodlands in the site also provide suitable foraging and/or roosting habitat for a variety of bats.

Based on habitat types present and absence of perennial or near-perennial water throughout the site, only a few species of amphibians and reptiles are expected to occur on-site. Western fence lizard (*Sceloporus occidentalis*) was the only reptile observed in the site; no amphibians were observed. The site is within the range of Pacific chorus frog (*Pseudacris regilla*), northern alligator lizard (*Gerrhonotus coeruleus*), common king snake (*Lampropeltis getulus*), western rattlesnake (*Crotalis viridis*), and common garter snake (*Thamnophis sirtalis*); these and other common amphibian and reptile species may also occur on-site.

WATERS OF THE U.S. AND WETLANDS: Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, many of their tributaries, and adjacent wetlands. State and federal agencies including CDFW and ACOE, and California Regional Water Quality Control Board have jurisdiction over these habitats. Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE *Wetlands Delineation Manual* and Regional

Supplement (ACOE, 1987; 2008). Waters of the U.S. are drainage features or water bodies as described in 33 CFR 328.4.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, irrigation canals, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

Three potential jurisdictional Waters of the U.S. were observed in the site, all of which are drainages. Dragoon Gulch flows generally north to south through the east part of the park; an unnamed tributary to Dragoon Gulch flows generally southwest to northeast just south of Race Track Road (see photographs in Attachment C). These creeks are best classified as "intermittent" and the limit of potential ACOE jurisdiction is defined either by the ordinary high water mark along the banks, or by the limits of adjacent wetlands. The widths of the potentially jurisdictional areas vary along the lengths of the creeks, ranging from approximately 10 feet to approximately 80 feet. The width of the potentially jurisdictional channel at the proposed new access road crossing of the creek along Race Track Road is approximately 75+/- feet.

Both Dragoon Gulch and this unnamed tributary to Dragoon Gulch appear to flow approximately one foot deep during rain events. Substrates in the active channels range from cobbles to soil. The adjacent wetlands are situated in low floodplain terraces adjacent to the active channels and support hydrophytic (i.e., wetland) plant species such as willows, alders, Fremont cottonwoods, blackberry brambles, wild grape, rabbit’s foot grass (*Polypogon monspeliensis*), umbrella sedge (*Cyperus eragrostis*), creeping spikerush (*Eleocharis macrostachya*), and Bermuda grass (*Cynodon dactylon*).

The third potential jurisdictional Waters of the U.S. is a very small ephemeral tributary to Dragoon Gulch flows generally west to east in the north part of the

site (see photograph in Attachment C). This drainage has poorly defined bed and banks, little evidence of surface flows along much of it's length following three years of drought, and does not support wetland vegetation. However, it is expected to convey water during heavy rain events, may support some wetland vegetation during normal rainfall years, and is a direct tributary to Dragoon Gulch. There are existing trails that cross over the lower section of this drainage in two locations; one crossing is just upstream from the confluence of the tributary with Dragoon Gulch, and one is approximately 100 feet further upstream. Two new trail crossings of this drainage will be constructed further upstream (west) along the creek.

Dragoon Gulch is mapped as an intermittent "blue-line" drainage on the USGS topographic map and is tributary to Woods Creek approximately 0.25 miles southeast of the site (Figure 2). Woods Creek, a perennial drainage, flows generally northeast to southwest is tributary Don Pedro Reservoir several miles southwest of the site. Don Pedro Reservoir is an impoundment of the Tuolumne River, which is a jurisdictional Water of the U.S. that is navigable further downstream. The tributary relationship of all of the on-site drainages to the Tuolumne River forms the basis for the on-site creeks being potentially jurisdictional Water of the U.S.

Other than the three drainages described above, no other potential jurisdictional Waters of the U.S. or wetlands were observed in the site. The site consists of upland woodland and chaparral habitats, and no areas within the site appear to have any potential to fall under the jurisdiction of ACOE as regulated wetlands. There are no other creeks or drainages in the site exhibiting attributes of jurisdictional Waters of the U.S.; there are also no open bodies or water such as ponds or lakes in the site. Beyond the adjacent wetlands discussed above, no areas were observed in the site meeting the mandatory criteria of jurisdictional wetlands (i.e., a dominance of hydrophytic vegetation, presence of hydric soils,

and evidence or wetland hydrology). Specifically, no vernal pools, seasonal wetlands, swamps, marshes, or other type of wetlands were observed in the site.

SPECIAL-STATUS SPECIES: Special-status species are plants and animals that are legally protected under the Federal and/or State Endangered Species Act (i.e., FESA and CESA, respectively) or other regulations. Both FESA and CESA prohibit unauthorized "take" (i.e., killing) of listed species, with take broadly defined in both acts to include activities such as harassment, pursuit and possession.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The federal Migratory Bird Treaty Act of 1918 and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. Fish and Game Code also provides protection for mammals and fish.

Special-status plants include species that are designated rare, threatened, or endangered and candidate species for listing by USFWS. Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the CEQA Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS, 2016). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Table 3 summarizes the listing status and habitat requirements of special-status species that have been documented in the CNDDB (2016) in the greater vicinity

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Potential for Occurrence in the Project Site
PLANTS						
Jepson's onion	*Allium jepsonii*	None	None	1B	Chaparral, cismontane woodland, lower montane coniferous forest; in serpentine or volcanic soils and usually in open areas.	Unlikely:the chaparral and oak woodlands in the site provide potentially suitable habitat for Jepson's onion; however, no open areas or serpentine substrates were observed. The only occurrence of this species in the CNDDB (2016) search area is in a lava flow community amongst seasonal wetlands on a Table Mountain approximately 3 miles southwest of the site.
Rawhide Hill onion	*Allium tuolumnense*	None	None	1B	Cismontane woodland and chaparral; always in serpentine substrates.	Unlikely: the oak woodlands and chaparral in the site provide potentially suitable habitat for Rawhide Hill onion; however, no serpentine substrates were observed. The site is also at the very top end of the published elevation range of this species (CNPS, 2010). There are several occurrences of this species in the CNDDB (2016) search area, in two clusters northwest and southwest of Jamestown. The nearest occurrence of Rawhide Hill onionis approximately 3.5 miles southwest of the site.
Nissenan manzanita	*Arctostaphylos nissenana*	None	None	1B	Closed cone coniferous forest and chaparral; in rocky soils.	Unlikely: the chaparral habitats in the site may be suitable for Nissenan manzanita. However, this easily-recognized evergreen shrub was not observed in the site and no patches of rocky soils were observed. The only occurrence of this species in the CNDDB (2016) search area is approximately 0.5 miles south of the site; this is also the only known population in Tuolumne County.
Big-scale balsamroot	*Balsamorhiza macrolepis var. macrolepis*	None	None	1B	Valley and foothill grassland, cismontane woodland; sometimes on serpentine substrates.	Unlikely:the chaparral habitats in the site may be suitable for big-scale balsamroot; however, no serpentine substrates were observed in the site. The only occurrence of this species in the CNDDB (2016) search area is an historical record from 1925 found somewhere near Sonora whose precise location is not known; it is mapped in the CNDDB non-specifically in downtown

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Potential for Occurrence in the Project Site
						Sonora.
Chinese Camp brodiaea	*Brodiaea pallida*	T	E	1B	Valley and foothill grassland, in intermittent streambeds on serpentine substrates.	Unlikely: the site consists of upland oak woodland and chaparral vegetation communities that do not provide suitable habitat for Chinese Camp brodiaea; no serpentine habitats were observed in the site. There are no occurrences of this species recorded in the CNDDB (2016) within the search area.
Red Hills soaproot	*Chlorogalum grandiflorum*	None	None	1B	Chaparral, cismontane woodland, or lower montane coniferous forest; usually in serpentine or gabbroic substrates.	Unlikely: no areas of rocky open sparsely vegetated chaparral and no serpentine or gabbroic habitats were observed in the site. The nearest occurrence of Red Hills soaproot in the CNDDB (2016) search area is approximately 3.5 miles southwest of the site.
Mariposa clarkia	*Clarkia biloba ssp. australis*	None	None	1B	Chaparral and cismontane woodland in serpentine substrates.	Unlikely: no serpentine habitats were observed in the site. The nearest occurrence of Mariposa clarkia in the CNDDB (2016) search area is approximately 8 miles southwest of the site.
Mariposa cryptantha	*Cryptantha mariposae*	None	None	1B	Chaparral; in serpentinite or rocky	Unlikely: no serpentine soils or rocky areas were observed in the site. The site is also at the very top end of the published elevation range of this species (CNPS, 2010). The nearest occurrence of Mariposa cryptantha in the CNDDB (2016) search area is approximately 4.5 miles southwest of the site.
Red Hills cryptantha	*Cryptantha spithamaea*	None	None	1B	Chaparral, cismontane woodland in serpentine substrates; sometimes on streambeds or openings.	Unlikely: no serpentine soils were observed in the site. The site is also well above the top end of the published elevation range of this species (CNPS, 2016). The nearest occurrence of Red Hills cryptantha in the CNDDB (2016) search area is approximately 4 miles southwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Potential for Occurrence in the Project Site
Tuolumne button celery	*Eryngium pinnatisectum*	None	None	1B	Vernal pools and other mesic habitats within cismontane woodland and lower montane coniferous forest.	Unlikely: the site consists of upland woodlands and chaparral communities that do not provide suitable habitat for this species. The nearest occurrence of Tuolumne button celery in the CNDDB (2016) search area; this population is reported in a serpentine vernal pool approximately 2.5 miles southwest of the site.
Tuolumne fawn lily	*Erythronium tuolumnense*	None	None	1B	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest; often on clay soils, cliffs, or near drainages.	Unlikely: the site consists of upland woodlands and chaparral communities that could potentially provide suitable habitat for this species. However, no cliffs or clay soils were observed in the site and there are only a few small drainages in the site. The site is also in the lower end of the elevation range of the species. There are several occurrences of Tuolumne fawn lily in the CNDDB (2016) search area; the nearest is approximately 3.5 miles northeast of the site. These populations are primarily along drainages and mostly at higher elevations than those in the site.
Parry's horkelia	*Horkelia parryi*	None	None	1B	Chaparral, and cismontane woodland, almost always Ione formation soils.	Unlikely: there are no areas of chaparral vegetation in the site and no Ione formation soils were observed. The site is also near the top end of the published elevation range of this species (CNPS, 2010). The nearest occurrence of Parry's horkelia in the CNDDB (2016) search area is approximately 9.5 miles northeast of the site.
Toulumne iris	*Iris hartwegii* ssp. *columbiana*	None	None	1B	Cismontane woodland, lower montane coniferous forest.	Unlikely: the site consists of upland woodlands and chaparral communities that could not provide suitable habitat for this species. There is only one occurrence of Tuolumne iris in the CNDDB (2016) search area; this population is approximately 6 miles northeast of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Potential for Occurrence in the Project Site
Congdon's lomatium	*Lomatium congdonii*	None	None	1B	Chaparral or cismontane woodland on serpentine substrates.	Unlikely: the site consists of upland woodlands and chaparral communities that could potentially provide suitable habitat for this species. However, no serpentine areas were observed in the site. The nearest occurrence of Congdon's lomatium in the CNDDB (2016) search area is approximately 3.5 miles southwest of the site.
Shaggyhair lupine	*Lupinus spectabilis*	None	None	1B	Chaparral or cismontane woodland within serpentine substrates.	Unlikely: the site consists of upland woodlands and chaparral communities that could potentially provide suitable habitat for this species. However, no serpentine areas were observed in the site. The nearest occurrence of shaggyhair lupine in the CNDDB (2016) search area is approximately 6 miles southwest of the site.
Whipple's monkeyflower	*Mimulus whipplei*	None	None	1A	Lower montane coniferous.	Unlikely: there is no suitable habitat in the site for this species. Whipple's monkeyflower is presumed to be extinct in California (CNPS, 2010); the last observation of this species was circa 1854, approximately 10.5 miles northwest of the site (CNDDB, 2016).
Yellow-lip pansy monkeyflower	*Mimulus pulchellus*	None	None	1B	Wet areas within lower montane coniferous forest and meadow vegetation.	Unlikely: the site does not provide suitable habitat for yellow-lip pansy monkeyflower. The site is also at the low end of the elevation range of the species (CNPS, 2010).The nearest occurrence of yellow-lip pansy monkeyflower in the CNDDB (2016) search area is approximately 3 miles southeast of the site.
Red Hills vervain	*Verbena californica*	T	T	1B	Cismontane woodland or valley and foothill grassland in mesic areas (usually serpentinite seeps or creeks).	Unlikely: no serpentine areas were observed in the site. The site is also above the elevation range of the species (CNPS, 2010).The nearest occurrence of California vervain in the CNDDB (2016) search area is approximately 9 miles southwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Potential for Occurrence in the Project Site
BIRDS						
Great gray owl	*Strix nebulosa*	None	E	N/A	Mixed conifer or red fir forests habitat, in or along the edge of meadows. Nests in large snags.	Unlikely: upland woodlands and chaparral vegetation communities so not provide suitable habitat for great gray owl. Great gray owl is primarily known from higher elevations than those in the site; the nearest occurrence of this species in the CNDDB (2016) search area is approximately 6 miles northeast of the site.
Bald eagle	*Haliaeetus leucocephalus*	T	E	N/A	Nests in large trees along rivers, ocean shores, and lake margins.	Unlikely: bald eagles could conceivably fly over the site on occasion but would not be expected to nest on-site. The nearest occurrence of this species in the CNDDB (2016) search area is approximately 6.5 miles southwest of the site at Don Pedro Reservoir.
Osprey	*Pandion haliaetus*	None	None	N/A	Nests within tall trees associated with large bodies of water that contain large populations of fish.	Unlikely: osprey could conceivably fly over the site on occasion but would not be expected to nest on-site as there are no large bodies of water nearby. The nearest occurrence of this in the CNDDB (2016) search area is approximately 4 miles northwest of the site.
Burrowing owl	*Athene cunicularia*	None	None	N/A	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Unlikely: there are no grasslands in the site. The nearest occurrence of burrowing owl in the CNDDB (2016) search area is approximately 6.5miles southeast of the site.
Tricolored blackbird	*Agelaius tricolor*	None	SC	N/A	Nests in dense brambles and emergent wetland vegetation associated with open water habitat.	Unlikely: there is no suitable nesting habitat for tricolored blackbird in or near the site. This species may occasionally fly over or forage in the site. The nearest occurrence of tricolored blackbird in the CNDDB (2016) search area is approximately 2 miles northwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Potential for Occurrence in the Project Site
MAMMALS						
Pacific fisher	*Martes pennanti pacifica*	C	SC	N/A	Coniferous forest; uses cavities, snags, logs and rocky areas for cover and denning.	Unlikely: No suitable habitat for this species was observed in the site; Pacific fisher is known from coniferous forests much higher in the Sierra Nevada mountains. The CNDDB (2016) does not contain any records of this species within the 240+/-square mile search area.
Townsend's big-eared bat	*Corynorhinus townsendii*	None	C	N/A	Wide variety of habitats, most common in mesic sites.	Possible: trees within the site may be suitable roost sites for this species. This species may also fly over or forage in the site on occasion. The nearest occurrence of Townsend's big-eared bat in the CNDDB (2016) search area is approximately 2.5 miles southwest of the site.
Pallid bat	*Antrozous pallidus*	None	SC	N/A	Open, dry habitats with rocky areas for roosting.	Possible: although there are some notable cliffs and rock outcrops in the project vicinity, there are no notable rocky areas in the site. The nearest occurrence of pallid bat in the CNDDB (2016) search area is approximately 3.5 miles southwest of the site.
Spotted bat	*Euderma maculatum*	None	SC	N/A	Requires crevices in caves or cliffs for roosting.	Unlikely: there is no suitable roost habitatin the site. This species may occasionally fly over or forage in the siteThe nearest occurrence of spotted bat in the CNDDB (2016) search area is approximately 7 miles southeast of the site.
Western mastiff bat	*Eumops perotis californicus*	None	SC	N/A	Open, dry habitats with crevices in cliff faces, high buildings, trees and tunnels for roosting.	Possible: while there are no cliffs or notable rock outcrops, trees in the site may be used by this species for roosting. Most of the nearby records in the CNDDB are on cliffs on table mountains; the nearest occurrence of western mastiff bat in the CNDDB (2016) search area is approximately 4 miles northwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Potential for Occurrence in the Project Site
Western red bat	*Lasiurus blossevillii*	None	SC	N/A	Roosts in trees in a wide variety of habitats between the coast western Sierra Nevada mountains.	Possible: trees in the site may be used by this species for roosting. The nearest occurrence of western red bat in the CNDDB (2016) search area is approximately 4 miles northwest of the site.
REPTILES & AMPHIBIANS						
California red-legged frog	*Rana aurora draytonii*	T	SC	N/A	Lowlands and foothills in or near permanent sources of water with vegetation.	Unlikely: there is no suitable perennial or near-perennial aquatic habitat in the site for California red-legged frog. The nearest occurrence of this species in the CNDDB (2016) search area is mapped in Woods Creek, which is just southeast of the site. The location of this historical record from 1950 found somewhere in Tuolumne County near “Woods Meadow”, “Woods Ridge”, or “Woods Ridge” whose precise location is not known; it is mapped in the CNDDB non-specifically along several miles of Woods Creek near Sonora.
California tiger salamander	*Ambystoma californiense*	T	T	N/A	Breeds in seasonal water bodies such as deep vernal pools or stock ponds. Requires small mammal burrows for summer refugia.	Unlikely: there are no vernal pools or seasonal stock ponds within or near the site to provide breeding habitat for California tiger salamander. The CNDDB (2016) does not contain any records of this species within the 240+/- search area. The site is also well outside (i.e., east) of the known species' range. The site is not within designated critical habitat for California tiger salamander (USFWS, 2005a).
Foothill yellow-legged frog	*Rana boylii*	None	SC	N/A	Rocky perennial streams in the Sierra and coastal foothills.	Unlikely: there is no suitable perennial or near-perennial aquatic habitat in the site for foothill yellow-legged frog. The nearest occurrence of this species in the CNDDB (2016) search area is approximately 8.5 miles southwest of the site.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Potential for Occurrence in the Project Site
Western pond turtle	*Emys marmorata*	None	SC	N/A	Permanent or semi-permanent bodies of water in a variety of habitats; require basking sites such as logs.	Unlikely: there is no suitable perennial or near-perennial aquatic habitat in the site. The nearest occurrence of western pond turtle in the CNDDB (2016) search area is approximately 8.5 miles northeast of the site.
Coast horned lizard	*Phyrnosoma blanvilii*	None	SC	N/A	Wide variety of habitats; most common in lowlands along sandy washes with scattered low bushes.	Unlikely: there is no suitable habitat in the site for this species. The nearest occurrence of coast horned lizard in the CNDDB (2016) search area is approximately 9 miles southwest of the site.
FISH						
Central Valley steelhead	*Oncorhynchus mykiss*	T	None	N/A	Riffle and pool complexes with adequate spawning substrates within Central Valley drainages.	None: there is no suitable perennial or near-perennial aquatic habitat in the site for Central Valley steelhead. There are no occurrences of Central Valley steelhead recorded in the CNDDB (2016) within the search area. There is no designated critical habitat for Central Valley steelhead (NOAA, 2005) in or near the site.
Delta smelt	*Hypomesus transpacificus*	T	T	N/A	Shallow lower delta waterways with submersed aquatic plants and other suitable refugia.	None: this species only occurs in Delta waterways. There are no occurrences of delta smelt recorded in the CNDDB (2016) within the search area. The site is not within designated critical habitat for delta smelt (USFWS, 1994).
San Joaquin roach	*Lavinia symmetricus ssp. 1*	None	SC	N/A	Tributaries to the San Joaquin River, from the Cosumnes River south.	None: there is no suitable aquatic habitat in the site for this species. The nearest occurrence of San Joaquin roach in the CNDDB (2016) search area is approximately 3 miles southwest of the site in Woods Creek.

TABLE 3

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[1]	CNPS List[2]	Habitat	Potential for Occurrence in the Project Site
INVERTEBRATES						
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	T	None	N/A	Elderberry shrubs in the Central Valley and surrounding foothills	Unlikely: no blue elderberry shrubs were observed within or adjacent to the site. The nearest occurrence of this species in the CNDDB (2016) search area is approximately 3 miles southwest of the site. The site is not within designated critical habitat for valley elderberry longhorn beetle (USFWS, 1980).
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	None	N/A	Vernal pools and seasonally inundated depressions in the Central Valley.	Unlikely: there are no vernal pools or seasonal wetlands in the site. The nearest occurrence vernal pool fairy shrimp in the CNDDB (2016) search area is approximately 8.5 miles southwest of the site. The site is not within designated critical habitat for any vernal pool shrimp species (USFWS, 2005b).

1 T= Threatened; E = Endangered; C = Candidate for listing; SC = California Species of Special Concern.
2 CNPS List 1A are species that are considered extinct; List 1B includes species which are rare, threatened, or endangered in California and elsewhere.

of the site, or for which there is potentially suitable habitat in or near the site. This table also includes an assessment of the likelihood of occurrence of each of these species in the site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

SPECIAL-STATUS PLANTS: Special-status plants recorded in the CNDDB (2016) within the search area (i.e., the USGS 7.5-minute Columbia, Columbia SE, Standard, and Sonora topographic quadrangles) or included on the USFWS IPaC Trust Report the USFWS IPaC Trust Report include Jepson's onion (*Allium jepsonii*), Rawhide Hill onion (*Allium tuolumnense*), Nissenan manzanita (*Arctostaphylos nissenana*), big-scale balsamroot (*Balsamorhiza macrolepis var. macrolepis*), Chinese Camp brodiaea (*Brodiaea pallida*), Red Hills soaproot (*Chlorogalum grandiflorum*), Mariposa clarkia (*Clarkia biloba ssp. australis*), Mariposa cryptantha (*Cryptantha mariposae*), Red Hills cryptantha (*Cryptantha spithamaea*), Tuolumne button celery (*Eryngium pinnatisectum*), Tuolumne fawn lily (*Erythronium tuolumnense*), Parry's horkelia (*Horkelia parryi*), Tuolumne iris (*Iris hartwegii* spp. *columbiana*), Congdon's lomatium (*Lomatium congdonii*), shaggyhair lupine (*Lupinus spectabilis*), yellow-lip pansy monkeyflower (*Mimulus pulchellus*), Whipple's monkeyflower (*Mimulus whipplei*), and Red Hills vervain (*Verbena californica)*.

These species, along with most of the special-status plants found in the low Sierra Nevada foothills generally occur in relatively undisturbed areas within unique vegetation communities such as vernal pools, marshes, swamps, and areas with unique soils (i.e., serpentine, gabbroic). The site primarily consists of oak woodland and chaparral vegetation and no unique habitat types or highly suitable habitat for special-status plants were observed in the site.

Several of the species in Table 3 can occur in oak woodland and chaparral vegetation communities, but have little potential for occurrence in the site due to an absence of serpentine and/or gabbroic soils. For example, big-scale

balsamroot, Red Hills soaproot, Rawhide Hill onion, Mariposa clarkia, Mariposa cryptantha, Red Hills cryptantha, Parry's horkelia, Congdon's lomatium, and shaggyhair lupine can occur in oak woodlands and chaparral, but only if appropriate soils are present. Where soils are present, several species may occur. There are clusters of several of these special-status plant species recorded in the CNDDB a few miles northwest and a few miles southwest of Jamestown, and a large cluster of almost all of these species approximately 10 miles southwest of the site near Chinese Camp (see CNDDB exhibit in Attachment B). No chaparral habitats with open rocky areas and/or unusual soils with potential to support special-status chaparral plant species known from the greater project vicinity were observed in the site.

There is no suitable habitat for several other species in Table 3, the site is either above or below the elevation ranges of a few species, and many of these species have very little chance of occurring on-site as they have never been documented nearby. For example, Tuolumne button celery grows in vernal pools and other mesic (i.e., wet) habitats; there are no vernal pools in the site and the drainages provide very low quality habitat for this species. Yellow-lip pansy monkeyflower grows in mesic areas, but only in lower montane coniferous forest and meadows, neither of which are found in the site. The site is at the low end of the elevation range of yellow-lip pansy monkeyflower. The site is also at the low end of the elevation range of Tuolumne fawn lily, and at the very top of the elevation range of Rawhide Hill onion and California vervain. Whipple's monkeyflower (*Mimulus whipplei*) in only know from coniferous forest habitats, has been presumed to be extinct in California for years, and is no longer recognized as a species (CNPS, 2016). The site contains upland woodlands that could not provide suitable habitat for Tuolumne iris. However, the site is in the low end of the elevation range of this species; there is also only one occurrence of this species in the 240+/- square mile CNDDB (2016) search area.

In summary, the site primarily consists of oak woodland and chaparral vegetation that is unremarkable and no unique habitat types or highly suitable habitat for

special-status plants was observed within the site. Due to lack of suitable habitat and absence of nearby populations, it is unlikely special-status plant species occur in the site.

SPECIAL-STATUS WILDLIFE: The potential for intensive use of habitats within the site by special-status wildlife species is also low. Special-status wildlife species recorded in the CNDDB (2016) in the search area and/or the USFWS IPaC Trust Report include great gray owl (*Strix nebulosa*), bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion halieatus*), burrowing owl (*Athene cunicularia*), tricolored blackbird (*Agelaius tricolor*), Pacific fisher (*Martes penanti pacfica*), Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossvelli*), California red-legged frog (*Rana aurora draytonii*), California tiger salamander (*Ambystoma californiense*), foothill yellow-legged frog (*Rana boylii*), western pond turtle (*Emys marmorata*), coast horned lizard (*Phyrnosoma blainvillii*), Central Valley steelhead (*Oncorhynchus mykiss*), delta smelt (*Hypomesus transpacificus*), San Joaquin roach (*Lavinia symmetricus ssp.*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), and vernal pool fairy shrimp (*Branchinecta lynchi*).

While surrounding areas may provide habitat for special-status wildlife species, few are expected to occur on-site on more than an occasional or transitory basis. Townsend's big-eared bat, pallid bat, spotted bat, western mastiff bat, western red bat, and other special-status bats may fly over or forage in the site; some of these bats may also roost on occasion in on-site trees. Special-status birds may fly over the site on occasion, but few would be expected to nest in the area. The site does not provide suitable forest/meadow edge habitat for great gray owl or suitable nesting habitat for tricolored blackbird, bald eagle, or osprey. No burrowing owls or suitable burrow habitat were observed in the site.

The site does not provide suitable aquatic habitat for any type of fish, California red-legged frog, western pond turtle, or foothill yellow-legged frog. There are no

vernal pools or seasonal wetlands in the site for California tiger salamander or vernal pool fairy shrimp. No blue elderberry shrubs were observed in the site, precluding the potential occurrence of valley elderberry longhorn beetle. The site does not provide suitable habitat for Pacific and is at a much lower elevation than this species is known to occur. The oak woodlands and chaparral habitats in the site provide potentially suitable, yet marginal habitat for coast horned lizard.

CRITICAL HABITAT: The site is not within designated critical habitat for California red-legged frog (USFWS, 2006), California tiger salamander (USFWS, 2005b), Central Valley steelhead (NOAA, 2005), or delta smelt (USFWS, 1994), vernal pool shrimp or plant species (USFWS, 2005a), valley elderberry longhorn beetle (USFWS, 1980), or other federally listed species (Attachment D).

Discussion, Conclusions and Recommendations

- The site consists of oak woodlands and chaparral. Similar woodlands and upland grasslands are widespread in this part of Tuolumne County, supporting a variety of mostly common plant and wildlife species.

- Development of the network of trails, the new access road and parking lot area will result in the conversion of a few acres of oak woodland habitat to recreational uses. Similar oak woodlands occur throughout the west slope of the Sierra Nevada in Tuolumne County and numerous other counties. This loss of a small area oak woodland habitat is viewed as a less than significant impact.

- The project will likely involve the removal of several trees large enough to qualify as heritage trees per the City's tree policy, especially along the new access road off of Race Track Road. Depending on the numbers and sizes of trees that are removed, mitigation for the loss of individual trees may be required.

- Potential jurisdictional Waters of the U.S. and wetlands observed in the site include Dragoon Gulch and two unnamed tributaries to Dragoon Gulch. The remainder of the site consists of upland woodlands and chaparral.

- Permits from ACOE, CDFW, and RWQCB should be secured prior to the placement of any fill material within potential jurisdictional Waters of the U.S. The only project impacts to potential jurisdictional Waters of the U.S. appear to be related to the construction of the new access road from Race Track Road across an unnamed tributary to Dragoon Gulch, and two trail crossings of the second unnamed tributary to Dragoon Gulch. The City should implement all permit conditions and mitigation measures related to the protection of sensitive aquatic habitats and species.

- Due to the lack of suitable habitats, unusual soils, and regional occurrences, it is unlikely special-status plants occur in the site.

- The likelihood of occurrence of special-status wildlife species in the site is considered low. No special-status wildlife species are expected to occur at or near the site on more than a very occasional or transitory basis. Special-status bats and birds may roost and/or nest in the site on occasion.

- To prevent potential impacts to special-status bats that may roost in the site, tree removal is recommended when daytime temperatures are 50° F or higher to ensure bats are active and can abandon any potential roosts as disturbance from the clearing activities occurs. Mid-November through early-March is outside of the maternity season and the low elevation of the site is expected to preclude hibernation activities. Therefore, clearing activities between mid-November through early-March is also recommended to substantially decrease the probability of occupancy of the site by bats.

- The on-site trees, shrubs, and grasslands may be used by nesting birds protected by the Migratory Bird Treaty Act of 1918 and Fish and Game Code of California. In order to avoid take of protected raptors and migratory birds, vegetation removal should be scheduled for between September 1 and January 31, if possible. Any construction or vegetation removal during the avian nesting season (February 1 through August 31) should be immediately preceded by survey. If active nests are found, a qualified biologist should mark the nest location(s), and identify an appropriate setback between the nest and construction or vegetation removal activities. Construction or vegetation removal within the setback shall be delayed until the young fledge.

Thank you again for asking Moore Biological Consultants to assist with this project. Please call me at (209) 745-1159 with any questions.

Sincerely,

Diane S. Moore, M.S.
Principal Biologist

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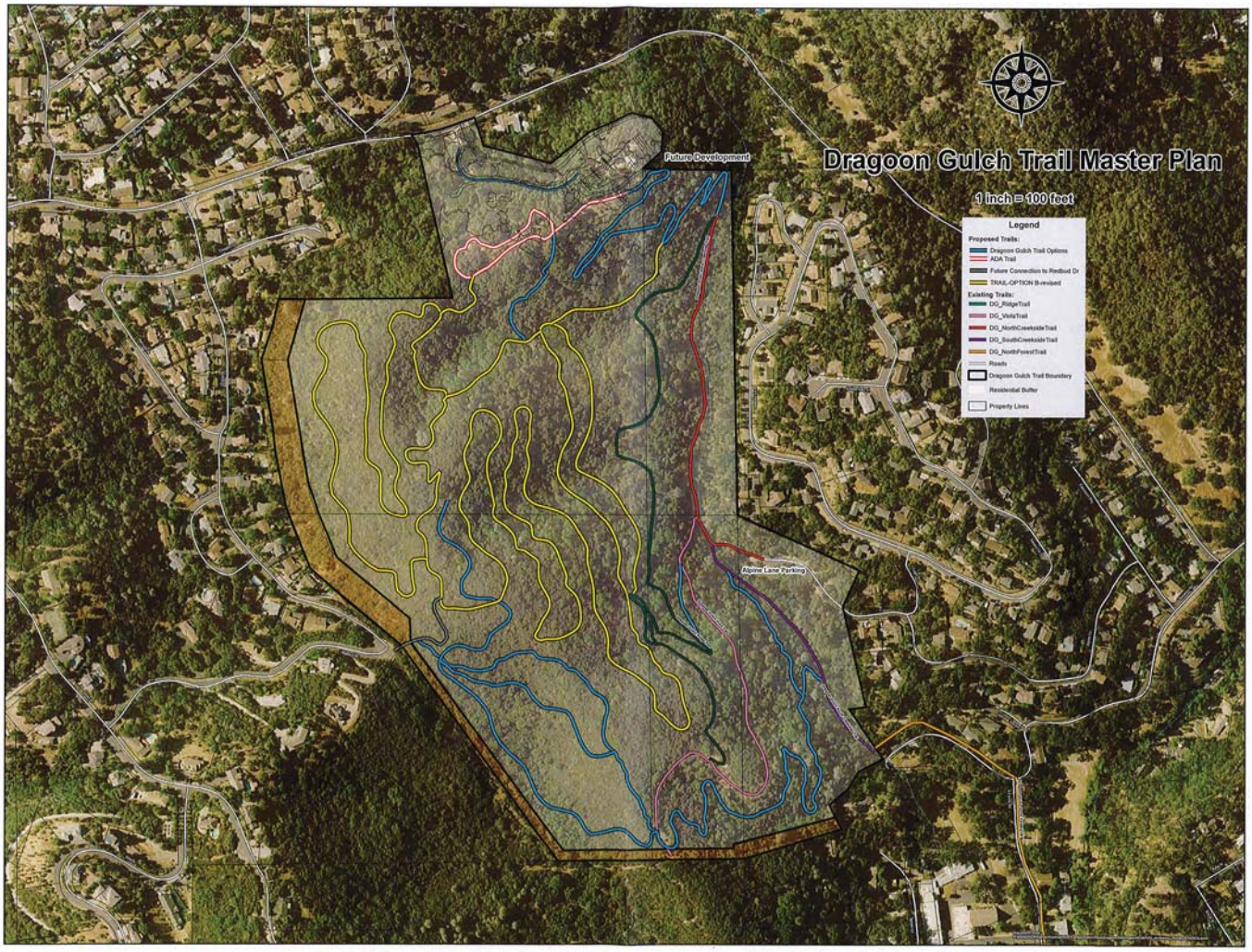
Attachment A

Dragoon Gulch Trail Master Plan

Map and Amenities Overview


Dragoon Gulch Trail Master Plan
1 inch = 100 feet
Legend
Proposed Trails:
Dragoon Gulch Trail Options
ADA Trail
Future Connection to Redbud Dr
TRAIL-OPTION B-revised
Existing Trails:
DG_RidgeTrail
DG_VistaTrail
DG_NorthCreeksideTrail
DG_SouthCreeksideTrail
DG_NorthForestTrail
Roads
Dragoon Gulch Trail Boundary
Residential Buffer
Property Lines
Future Development
Alpine Lane Parking

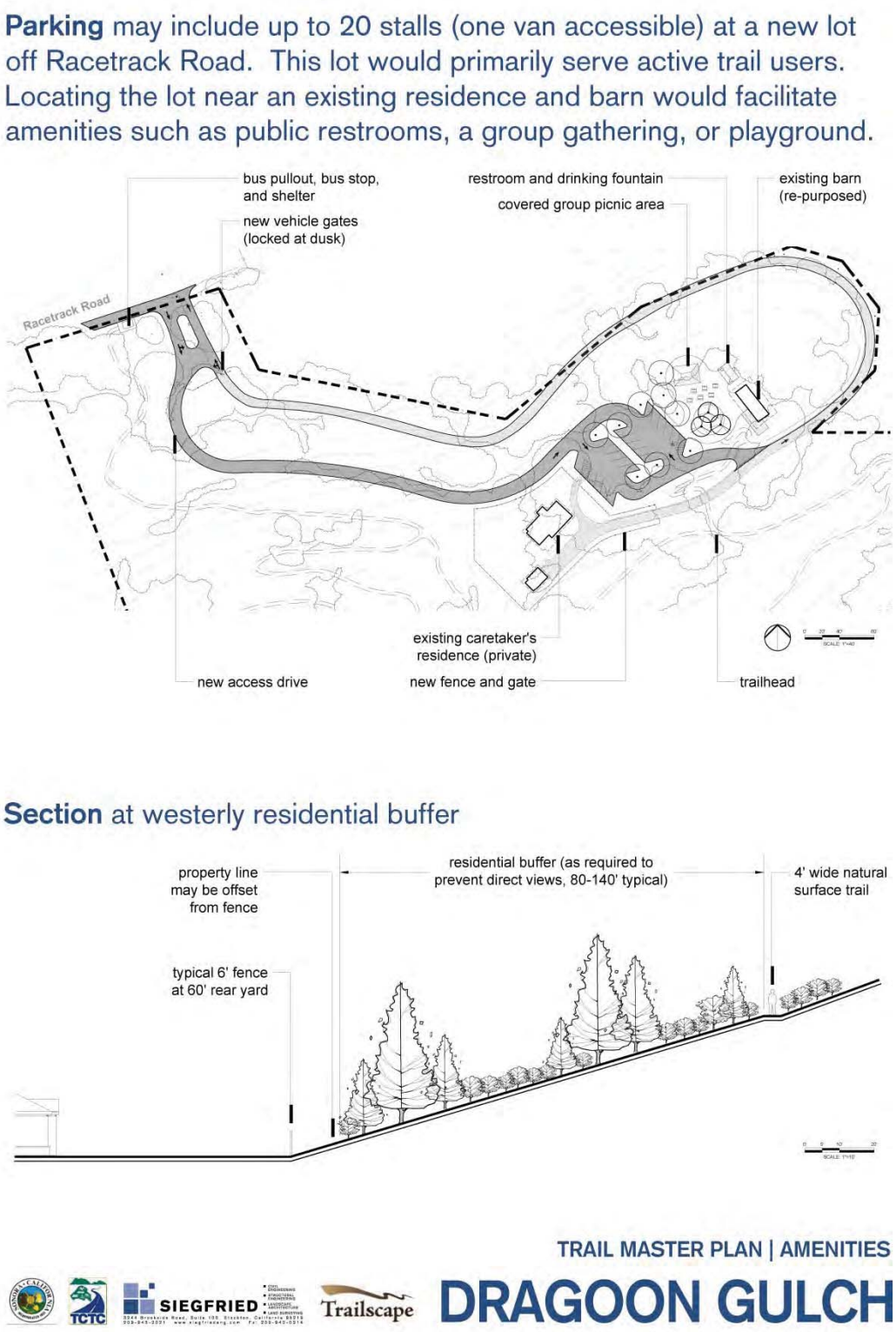


Figure 7: Proposed Amenities

Attachment B

CNDDB Summary Report and Exhibits

& USFWS IPaC Trust Resource Report

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

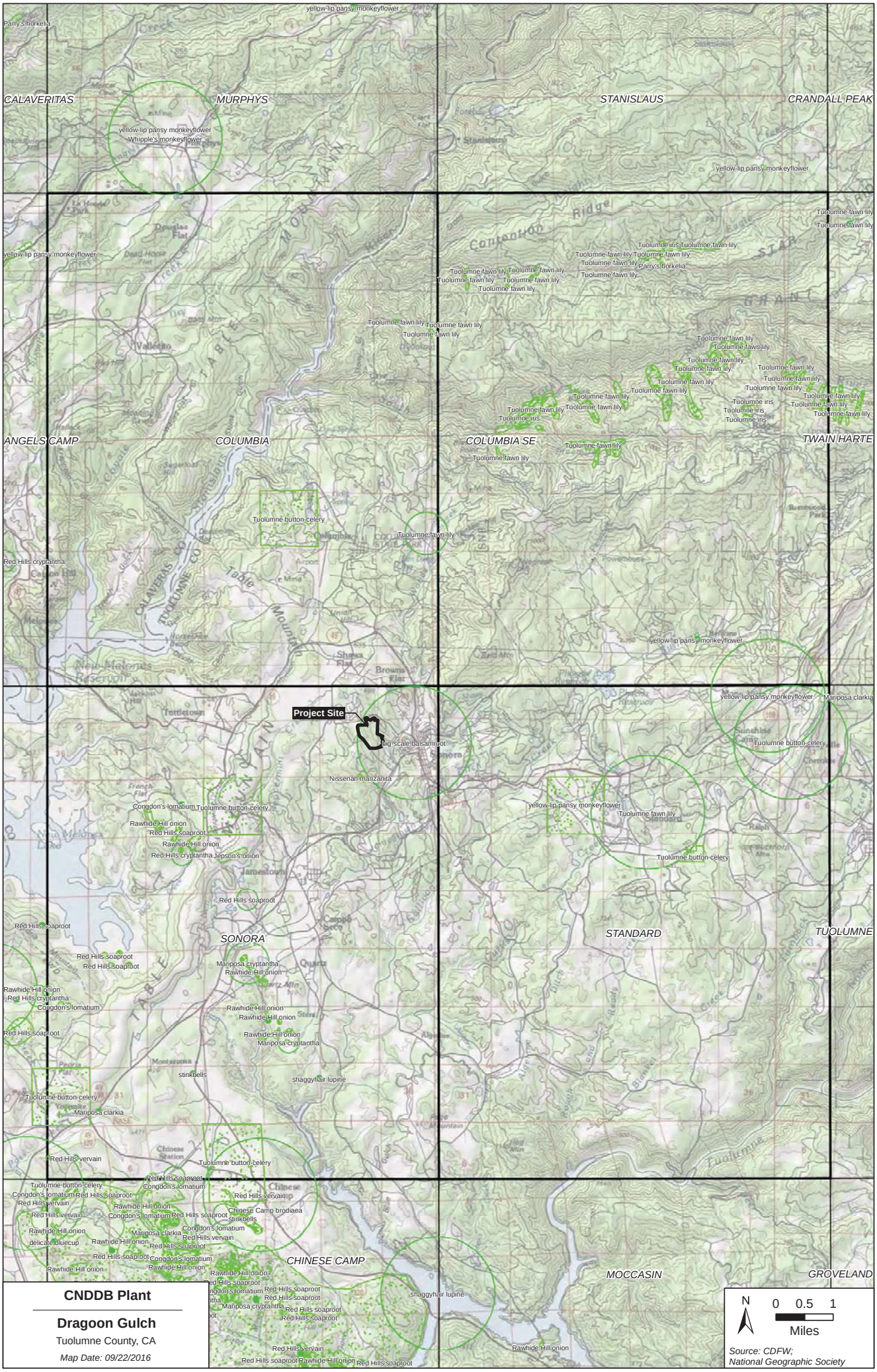
Query Criteria: Quad IS (Columbia (3812014) OR Columbia SE (3812013) OR Sonora (3712084) OR Standard (3712083))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	None	G2G3	S1S2	SSC
Allium jepsonii Jepson's onion	PMLIL022V0	None	None	G2	S2	1B.2
Allium tuolumnense Rawhide Hill onion	PMLIL022W0	None	None	G2	S2	1B.2
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Aphrastochthonius grubbsi Grubbs' Cave pseudoscorpion	ILARA37010	None	None	G1G2	S1S2	
Arctostaphylos nissenana Nissenan manzanita	PDERI040V0	None	None	G1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Banksula martinorum Martins' cave harvestman	ILARA14070	None	None	G1	S1	
Banksula melones Melones Cave harvestman	ILARA14010	None	None	G1	S1	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Chlorogalum grandiflorum Red Hills soaproot	PMLIL0G020	None	None	G2	S2	1B.2
Clarkia biloba ssp. australis Mariposa clarkia	PDONA05051	None	None	G4G5T2T3	S2S3	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	G3G4	S2	SSC
Cryptantha mariposae Mariposa cryptantha	PDBOR0A1Q0	None	None	G3	S3	1B.3
Cryptantha spithamea Red Hills cryptantha	PDBOR0A2M2	None	None	G2	S2	1B.3
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eryngium pinnatisectum Tuolumne button-celery	PDAPI0Z0P0	None	None	G2	S2	1B.2
Erythronium tuolumnense Tuolumne fawn lily	PMLIL0U0H0	None	None	G2G3	S2S3	1B.2
Euderma maculatum spotted bat	AMACC07010	None	None	G4	S3	SSC
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
Falco mexicanus prairie falcon	ABNKD06090	None	None	G5	S4	WL
Fritillaria agrestis stinkbells	PMLIL0V010	None	None	G3	S3	4.2
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Horkelia parryi Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
Iris hartwegii ssp. columbiana Tuolumne iris	PMIRI090D2	None	None	G4T1	S1	1B.2
Larca laceyi Lacey's Cave pseudoscorpion	ILARA39010	None	None	G1G2	S1	
Lasiurus blossevillii western red bat	AMACC05060	None	None	G5	S3	SSC
Lasiurus cinereus hoary bat	AMACC05030	None	None	G5	S4	
Lavinia symmetricus ssp. 1 San Joaquin roach	AFCJB19021	None	None	G4T3Q	S3	SSC
Lomatium congdonii Congdon's lomatium	PDAPI1B0B0	None	None	G2	S2	1B.2
Lupinus spectabilis shaggyhair lupine	PDFAB2B3P0	None	None	G2	S2	1B.2
Mimulus pulchellus yellow-lip pansy monkeyflower	PDSCR1B280	None	None	G2	S2	1B.2
Mimulus whipplei Whipple's monkeyflower	PDSCR1B2U0	None	None	GXQ	SX	1A
Monadenia circumcarinata keeled sideband	IMGASC7020	None	None	G1	S1	
Monadenia mormonum buttoni Button's Sierra sideband	IMGASC7071	None	None	G2T1	S1S2	
Monadenia mormonum hirsuta hirsute Sierra sideband	IMGASC7072	None	None	G2T1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Monadenia tuolumneana Tuolumne sideband	IMGASC7100	None	None	G1	S1	
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Pseudogarypus orpheus Music Hall Cave pseudoscorpion	ILARA40010	None	None	G1G2	S1	
Punctum hannai Trinity Spot	IMGAS47080	None	None	G1G2	S1S2	
Rana boylii foothill yellow-legged frog	AAABH01050	None	None	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Strix nebulosa great gray owl	ABNSB12040	None	Endangered	G5	S1	
Stygobromus gradyi Grady's Cave amphipod	ICMAL05460	None	None	G1	S1	
Stygobromus harai Hara's Cave amphipod	ICMAL05470	None	None	G1G2	S1S2	
Verbena californica Red Hills vervain	PDVER0N050	Threatened	Threatened	G2	S2	1B.1

Record Count: 52

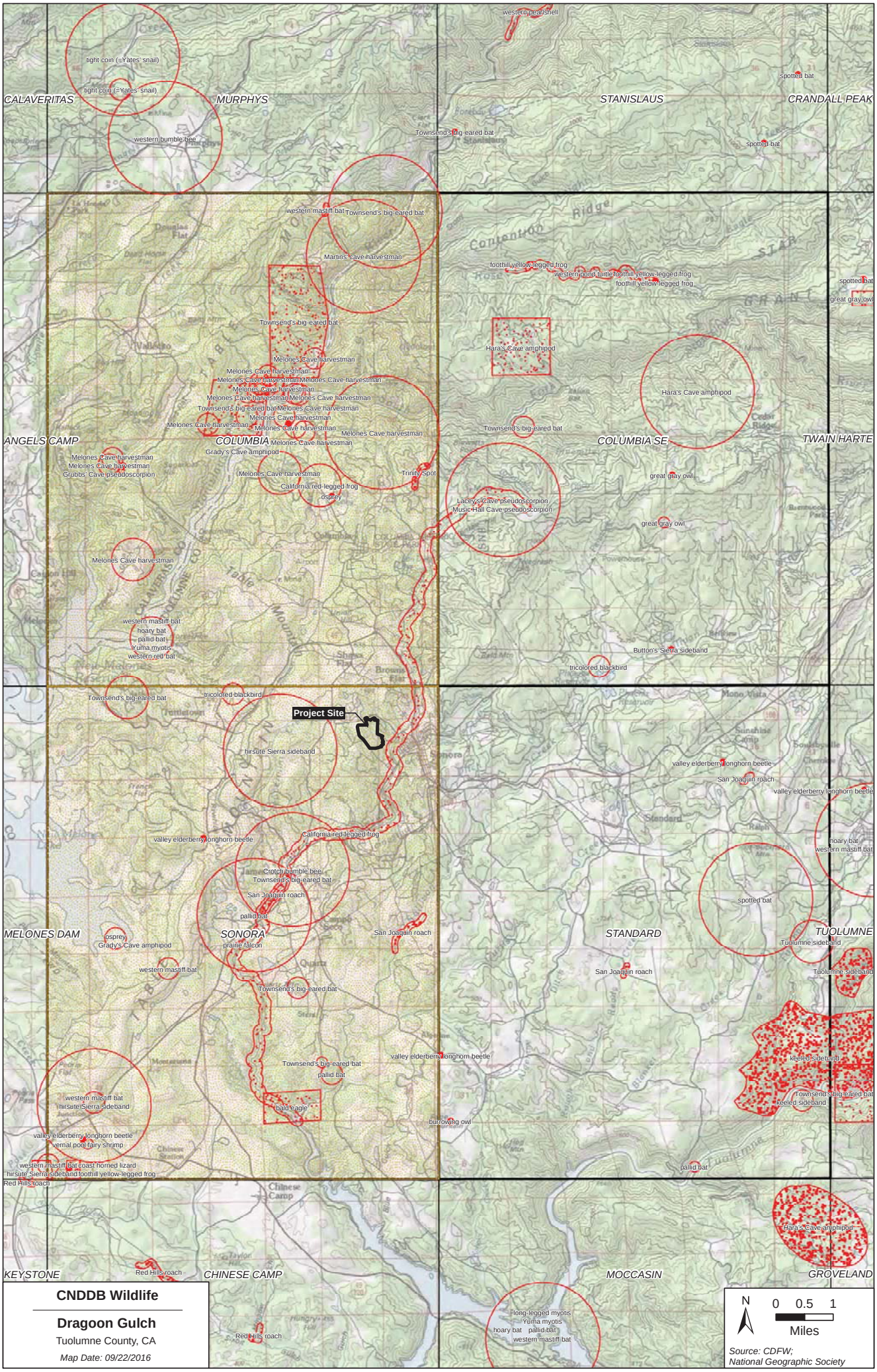


CNDDB Plant

Dragoon Gulch

Tuolumne County, CA

Map Date: 09/22/2016



CNDDB Wildlife

Dragoon Gulch

Tuolumne County, CA

Map Date: 09/22/2016

Source: CDFW; National Geographic Society

U.S. Fish & Wildlife Service

Dragoon Gulch

IPaC Trust Resources Report

Generated September 26, 2016 03:18 PM MDT, IPaC v3.0.9

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.

IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

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U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

Dragoon Gulch

LOCATION

Calaveras and Tuolumne counties, California

DESCRIPTION

Recreational trails

IPAC LINK

https://ecos.fws.gov/ipac/project/WFBJC-LDB2Z-HF5CH-UTEEI-XAXHBI

U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

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

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency.

A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Amphibians

California Red-legged Frog Rana draytonii — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D02D

California Tiger Salamander Ambystoma californiense — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D01T

Crustaceans

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K03G

Fishes

Delta Smelt Hypomesus transpacificus — Threatened

CRITICAL HABITAT

There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E070

Steelhead Oncorhynchus (=Salmo) mykiss — Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E08D

Flowering Plants

Chinese Camp Brodiaea Brodiaea pallida — Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q09J

Red Hills Vervain Verbena californica — Threatened

CRITICAL HABITAT

No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q2LO

Critical Habitats

There are no critical habitats in this location

Attachment C

Photographs

Oak woodlands along a proposed trail in the east part of the park, looking northwest; 09/29/14.
This trail will ascend south and up the hillside west of Dragoon Gulch from the existing paved trail.

South end of a proposed trail along an old road in the southeast part of the park, looking northwest; 09/29/14.

The upstream end of Dragoon Gulch in the northeast corner of the park, looking north; 09/29/14.

North end of the existing trail adjacent to Dragoon Gulch, looking south; 09/29/14.

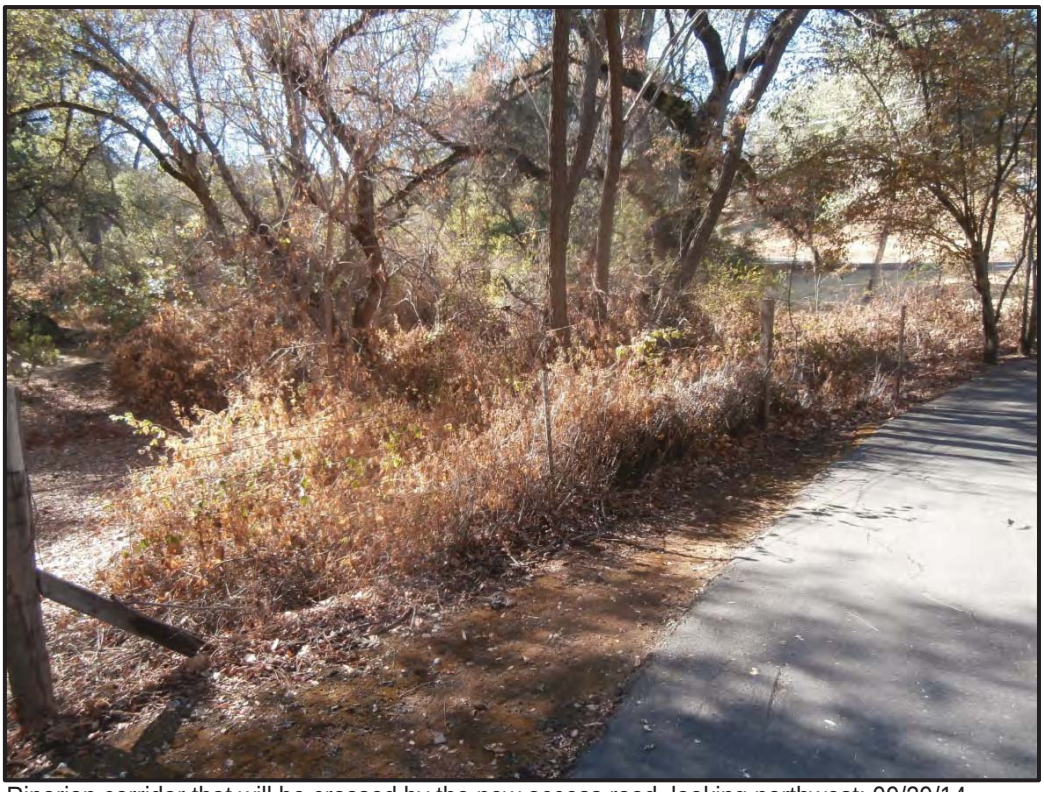
Dense manzanita in the southeast part of the park, looking northwest; 09/29/14.

Manzanita along a future trail on a ridge in the south part of the park, looking northwest; 09/29/14.

Upper part of an ephemeral creek that drains west to east into Dragoon Gulch, looking east; 09/29/14.

Hillside above the existing road where the new road will be constructed, looking east; 09/29/14.
Note the existing house on the top of the hill; the parking lot will be just east to the house.

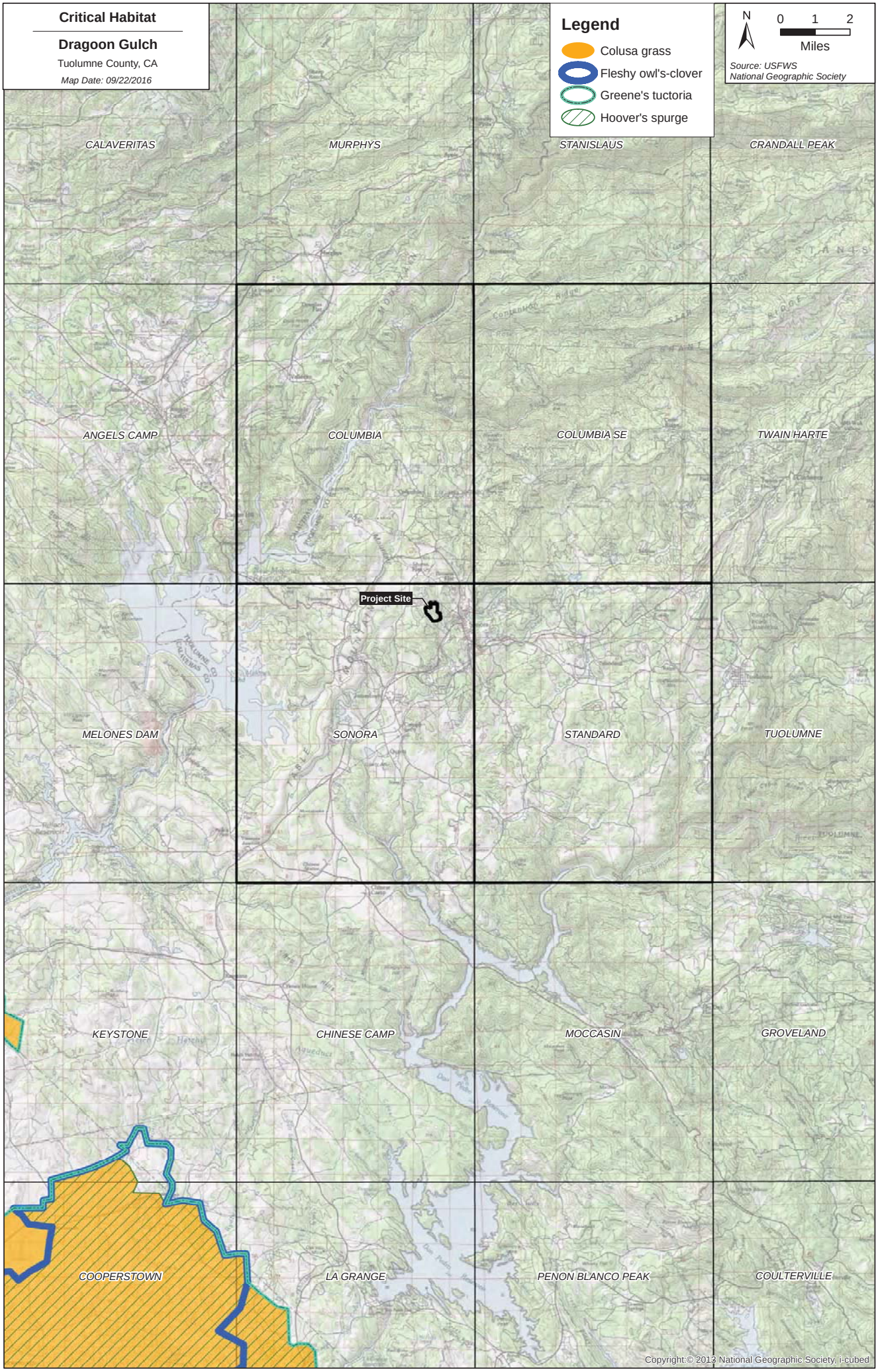
Looking downstream from the middle of the creek that is just south of Racetrack Road, looking northeast ; 09/29/14. Note the large culvert under the existing access road.



Riparian corridor that will be crossed by the new access road, looking northwest; 09/29/14. The new access road will be parallel to and just upstream (west) of the existing road.

Attachment D

Designated Critical Habitat


Critical Habitat
Dragoon Gulch
Tuolumne County, CA
Map Date: 09/22/2016
Legend
Colusa grass
Fleshy owl's-clover
Greene's tuctoria
Hoover's spurge
N
0 1 2
Miles
Source: USFWS
National Geographic Society
CALAVERITAS
MURPHYS
STANISLAUS
CRANDALL PEAK
ANGELS CAMP
COLUMBIA
COLUMBIA SE
TWAIN HARTE
Project Site
MELONES DAM
SONORA
STANDARD
TUOLUMNE
KEYSTONE
CHINESE CAMP
MOCCASIN
GROVELAND
COOPERSTOWN
LA GRANGE
PENON BLANCO PEAK
COULTERVILLE
Copyright:© 2013 National Geographic Society, i-cubed

DRAGOON GULCH
MASTER TRAILS PLAN

CULTURAL RESOURCES INVENTORY AND EVALUATION
SONORA, TUOLUIMNE COUNTY, CALIFORNIA

Sections 25, 26, 35, 36, T. 2N, R. 14E MDM
Sonora, Calif. 7.5' USGS Quadrangle
Approximately 7.5 Miles Linear

Prepared by

Ric Windmiller, M.A., R.P.A.
and
Katherine Vallaire, M.A.

Ric Windmiller
Consulting Archaeologist
2280 Grass Valley Highway #205
Auburn, California 95603

Prepared for

Development Impact, Inc.
5050 Laguna Boulevard, Suite 112-613
Elk Grove, California 95758

December, 2014

MANAGEMENT SUMMARY

The City of Sonora plans to complete the build-out of the Dragoon Gulch Recreational Area, which is owned and operated by the City of Sonora, Tuolumne County, California. Approximately 35 acres were previously developed with a network of four foot wide natural surface trails. The proposed plan would extend the existing trail system throughout the remaining 67 acres of the city's Dragoon Gulch property.

The purpose of the present study is to provide a cultural resources inventory and evaluation of cultural resources to help meet the requirements for CEQA and NEPA/National Historic Preservation Act, Section 106 reviews.

Efforts to identify cultural resources included a records search by the Central California Information Center, California Historical Resources Information System; a sacred lands file search by the Native American Heritage Commission and contacts with Native Americans listed by the commission for this particular project; a review of historic maps and literature review of published and unpublished sources on local prehistory, ethnography, archaeology and history and; a pedestrian field inspection.

The Area of Potential Effect (APE) for cultural resources would be the proposed trail routes, the existing access road and a second proposed new road that would connect Racetrack Road with the proposed 20-stall parking area at the proposed new trailhead. Therefore, the APE included the existing buildings at 11291 Racetrack Road and the area of proposed parking, picnicking and related facilities at the new trailhead.

Due to the brushy nature of the trails APE, the proposed route of most of the trails was cleared of brush in advance of the pedestrian survey. However, there were difficulties in identifying proposed trails in some places while in one area, trails had not been cleared in advance of the survey.

Five historic archaeological sites were identified within the defined APE. Four buildings 50 years old or older were also identified within the APE. No Native American cultural resources were identified during the study.

The criteria of eligibility for the National Register of Historic Places, California Register of Historical Resources and for unique archaeological resources as defined in the California Environmental Quality Act's Guidelines were applied to the cultural resources identified during the study. As a result, no historic properties eligible for the National Register, historical resources eligible for the California Register or unique archaeological resources were identified in the assessment.

While no historic properties, historical resources or unique archaeological resources were identified during the study, it is probable that significant historic or prehistoric archaeological resources may be encountered when clearing the trail route(s) of brush that have not already been cleared or during ground disturbing activities. Therefore, it is recommended that an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric and historical archaeology monitor brush clearing and ground disturbing activities.

In the event of any find(s), the archaeologist would evaluate the find(s) and if eligible for the National Register, California Register or a unique archaeological resource, then the archaeologist would recommend alternative(s) to avoid the find(s) and/or to mitigate any

adverse effects if they cannot be avoided. Work may continue on other parts of the project site while mitigation proceeds.

In the unlikely event of the accidental discovery or recognition of any human remains, there shall be no further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains, until compliance with applicable laws and regulations has occurred.

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INTRODUCTION

The City of Sonora's Dragoon Gulch Master Trails Plan proposes the build-out of the Dragoon Gulch Recreation Area. Approximately 35 acres has already been developed with a network of trails. The Trails Master Plan calls for an approximately 7.5 mile extension of existing trails throughout an additional 67 acres recently purchased by the City. The Master Plan also calls for construction of a new 20-stall parking lot at a new trailhead accessed from Racetrack Road in the City of Sonora, Tuolumne County, California (see Figures 1 and 2, below).

The purpose of the present study is to provide a cultural resources inventory and evaluation of cultural resources to meet requirements for CEQA/NEPA and National Historic Preservation Act, Section 106 consultation.

Federal Regulatory Background

A Section 106 consultation is a federal review, separate from any environmental or planning reviews required by state and local laws and ordinances. The purpose of Section 106 is to avoid unnecessary harm to historic properties, which include any National Register of Historic Places listed or eligible prehistoric or historic objects, sites, buildings, structures or districts (National Park Service 1991: Appendix IV-2). Under federal regulations at 36 CFR Part 800, the basic steps in a Section 106 review include:

- **Initiating the Section 106 process** (This step was added in 1999 to encourage early consideration of the potential effects of the federal permitting or other action, to coordinate with other reviews, to identify consulting parties such as the State Historic Preservation Officer and federally recognized Indian tribes, and to make plans for other public involvement);

- **Identifying historic properties** (The federal agency is responsible for defining the Area or Areas of Potential Effects; also included in this step is the identification of cultural resources, evaluating the eligibility of those resources for the National Register, including sites to which Indian tribes attach religious and cultural significance, determining the eligibility of those resources for the National Register and determining whether or not historic properties will be affected);

- **Assessing Adverse Effects** (The federal agency must consider both direct and indirect effects, reasonably foreseeable effects that are cumulative, later in time or at a distance, and with respect to all qualifying characteristics of a historic property--*e.g.*, if an archaeological site is important for its scientific information potential and for its cultural or religious importance to an Indian tribe, then the adverse effects on both must be considered).

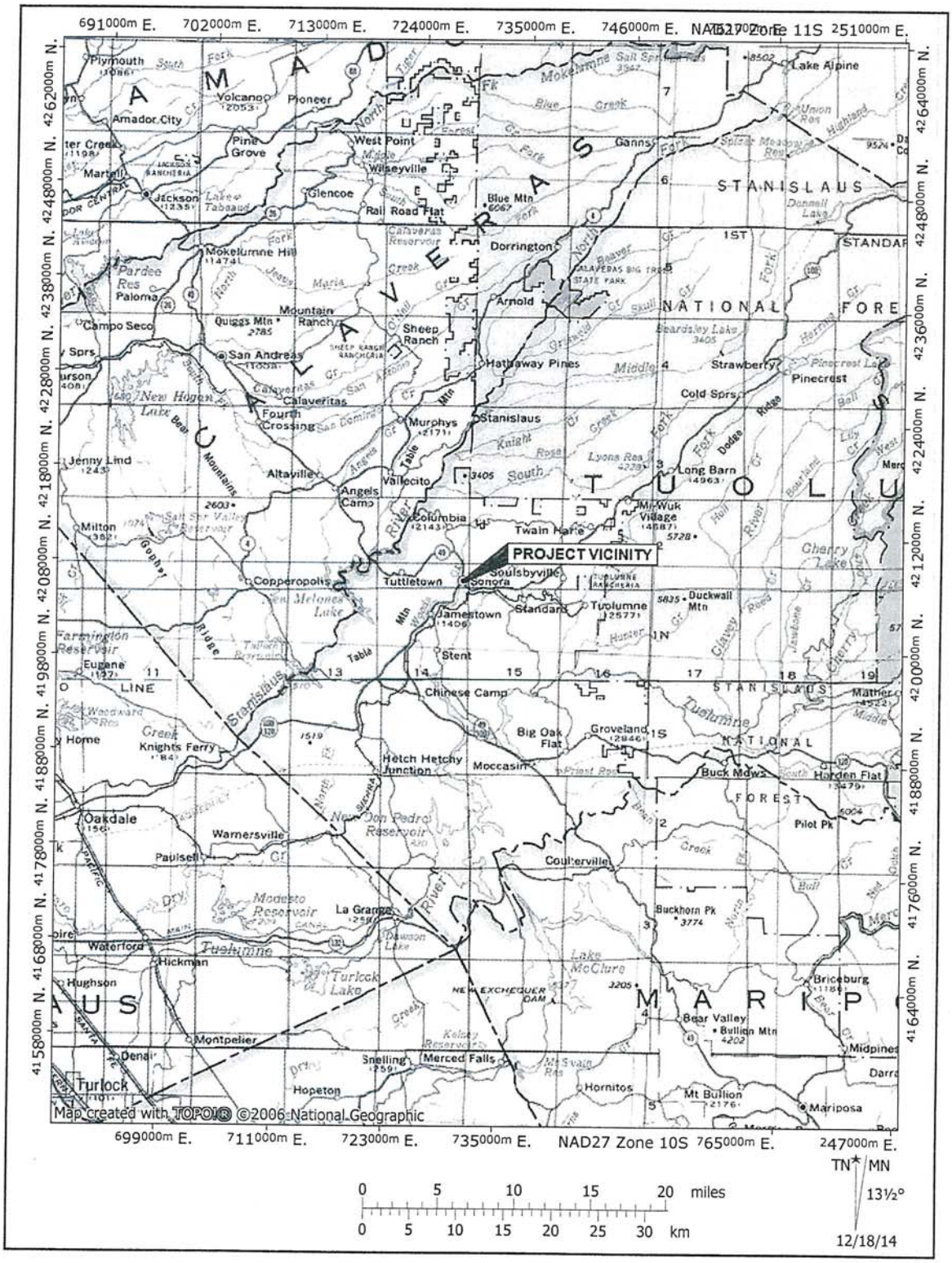

Figure 1. Project vicinity map.

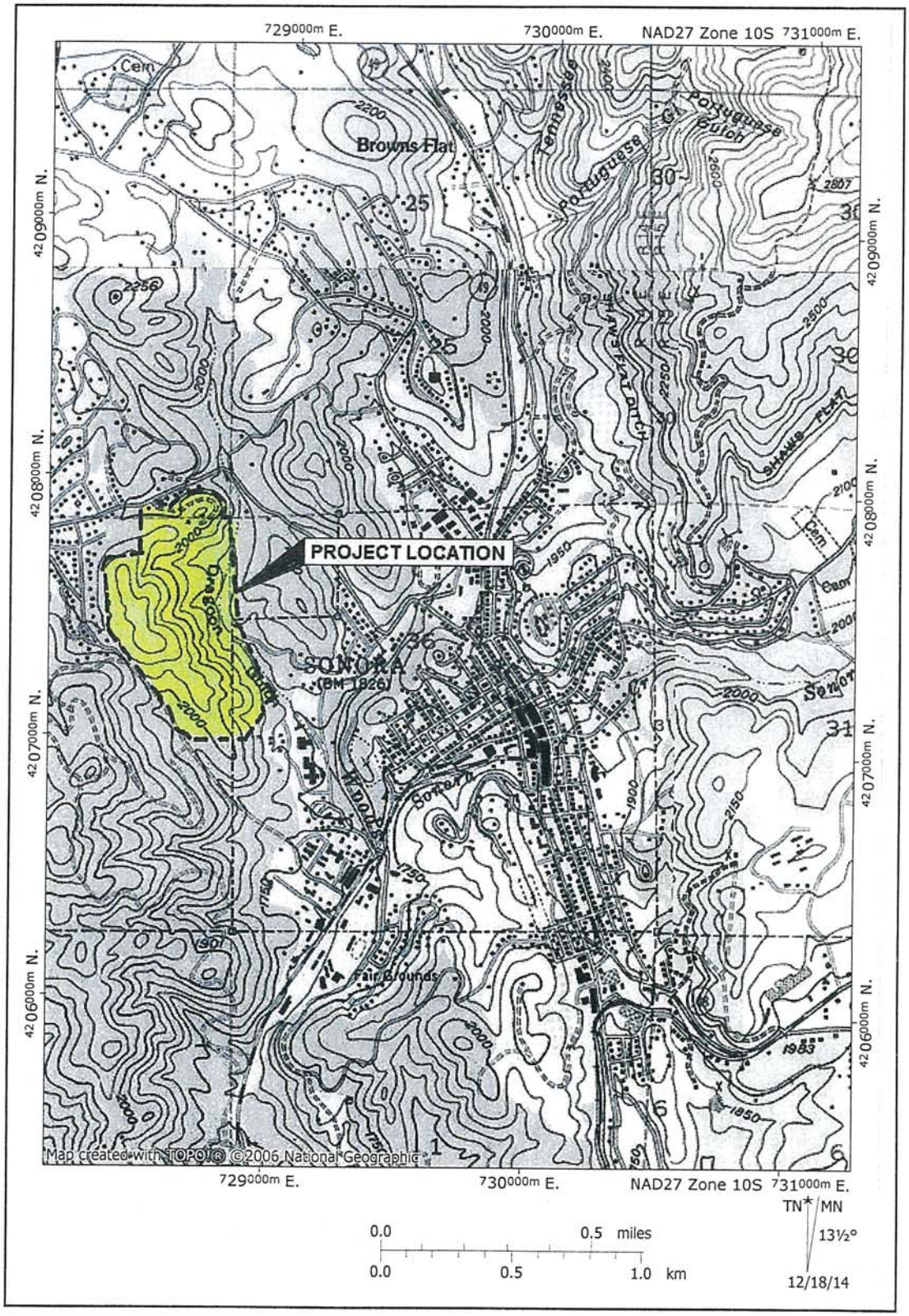

Figure 2. Project location

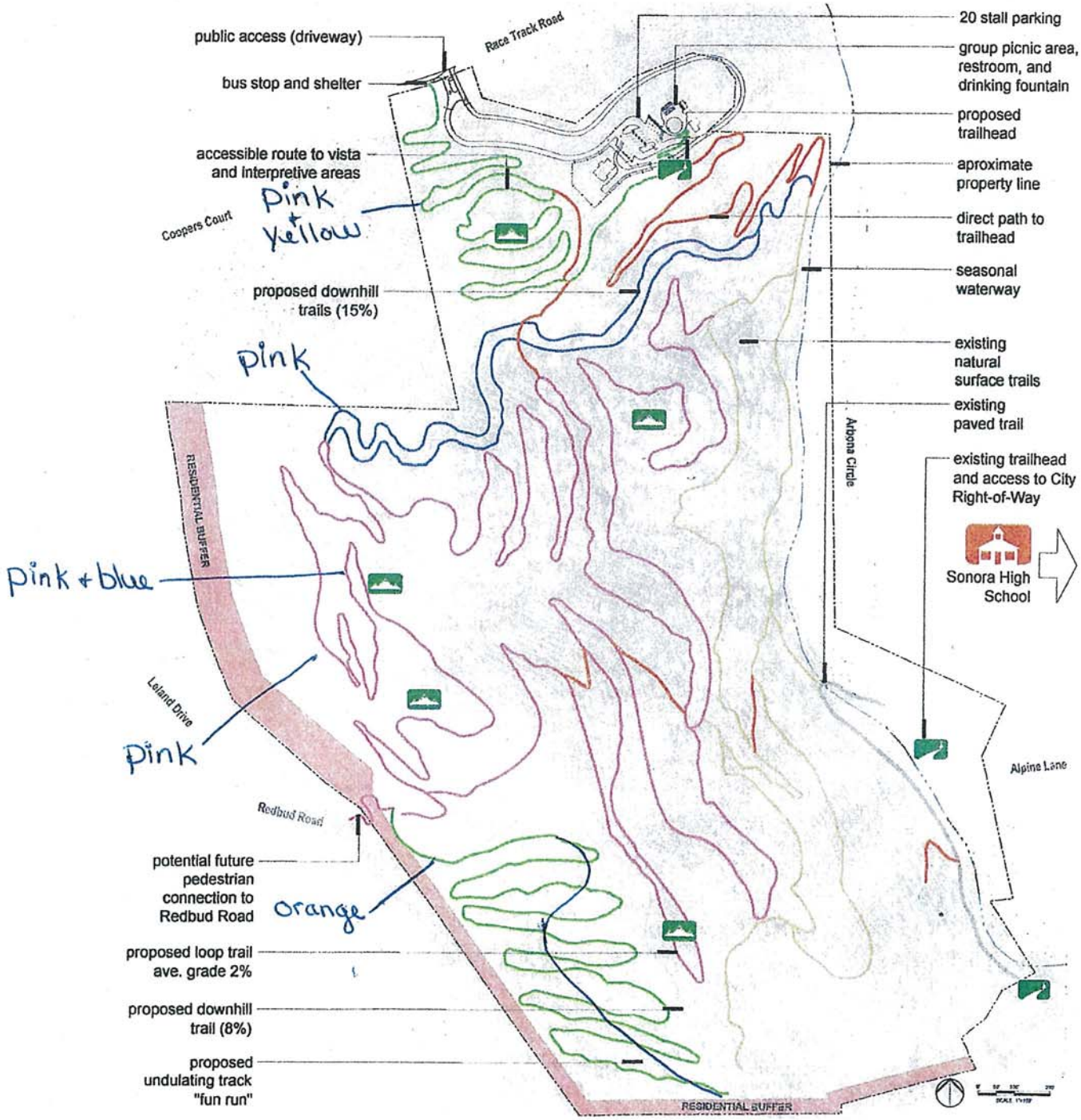

Figure 3. Area of Potential Effects (APE) consists of two components: the area encompassing the existing and proposed access roads connecting Racetrack Road with the trail head including the existing house, outbuildings and grounds at the north end of the project site and; the proposed trails including short cuts between the existing trails in the east portion of Dragoon Gulch. The various colors (Pink + Blue, Orange, etc.) refer to the colors of flagging used to mark each proposed trail.

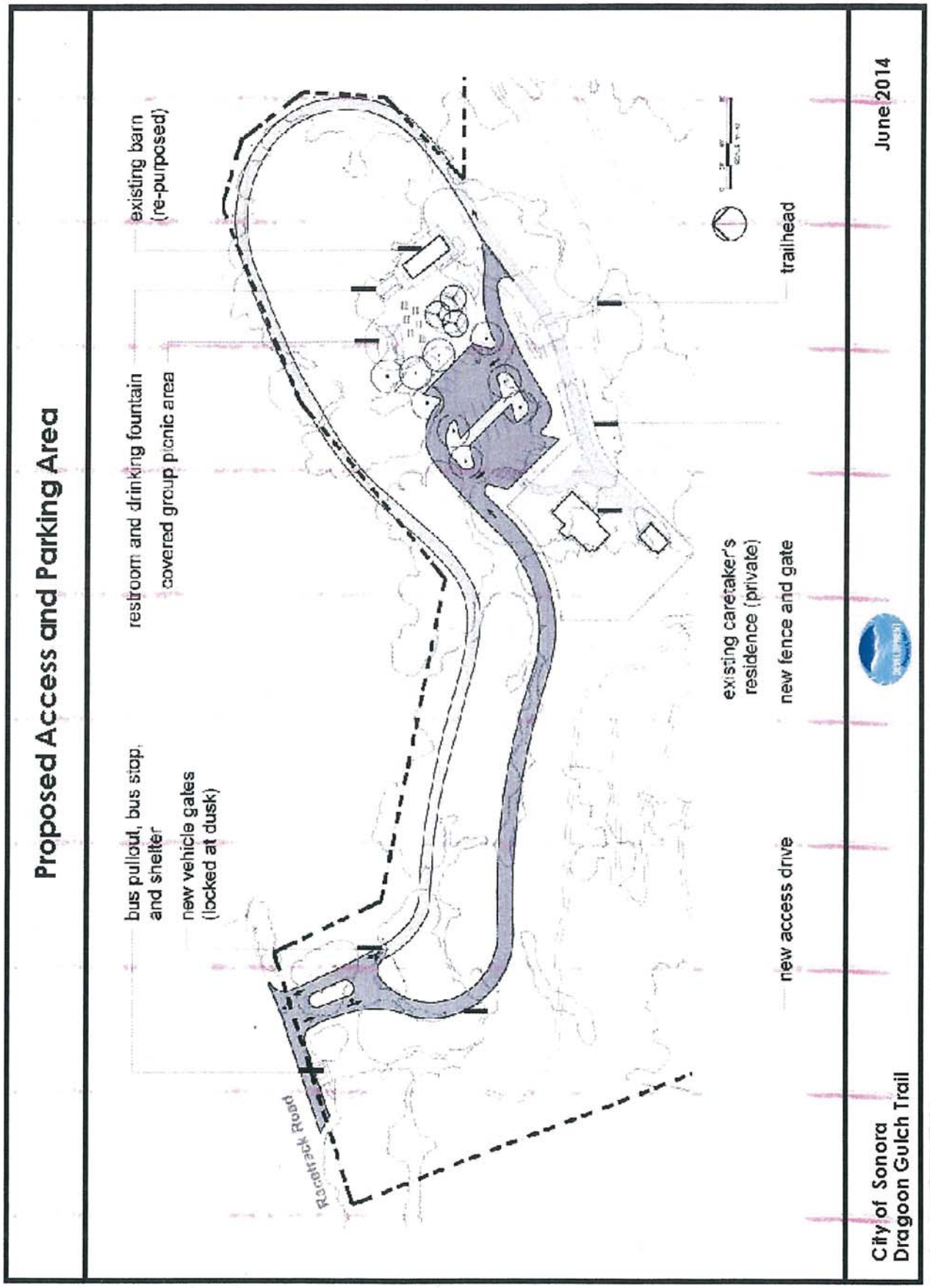

Figure 4. Enlarged north area of Dragoon Gulch showing existing and proposed access roads, existing buildings, proposed picnic, parking and trailhead area.

- **Resolving Adverse Effects** [The process of negotiating a Memorandum of Agreement (MOA) between the consulting parties is now streamlined and may involve only the federal agency and the State Historic Preservation Officer as signatories. However, the Advisory Council recommends that the federal agency should invite federally-recognized Indian tribes that attach religious and cultural significance to properties off tribal lands to concur with the findings in the MOA].

Under federal regulations, where there is a federal undertaking on non-federal land (*e.g.*, federal permitting, licensing or funding), a consultant may gather information necessary for the federal agency to meet its responsibilities under Section 106, but the agency official remains legally responsible for all required findings and determinations [36 CFR Part 800.2(a)(3)].

In accordance with 36 CFR Part 800.2(c)(ii)(A), (B) and (C), it is the agency official who has the responsibility to make a reasonable and good faith effort to identify Indian tribes that shall be consulted in the Section 106 process.

CEQA Regulatory Background

In 1992, the Public Resources Code was amended as it affects cultural resources. The amendments included creation of the California Register of Historical Resources (Public Resources Code §5020.4, §5024.1 and §5024.6). While the amendments became effective in 1993, it was not until January 1, 1998, that the implementing regulations for the California Register were officially adopted (Public Resources Code §4850 *et seq.*).

The purpose of the present study is also to identify any cultural resources eligible for the California Register of Historical Resources and archaeological resources that potentially meet criteria as "unique archaeological resources" under current CEQA statutes and guidelines.

CEQA statutes [Public Resources Code §21001(b) *et seq.*] require planning agencies to carefully consider the potential effects of a project on historical resources. Under the revised and adopted CEQA guidelines in §15064.5, a "historical resource" includes: a resource listed in or eligible for the California Register of Historical Resources; or listed in a local register of historical resources; or identified in a historical resource survey and meeting requirements in §5024.1(g) of the Public Resources Code; or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines historically significant, provided the determination is supported by substantial evidence in light of the whole record; or a resource so determined by a lead agency as defined in Public Resources Code §5020.1(j) or §5024.1.

Under CEQA guidelines, "A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment [Public Resources Code §15064.5(b)]. "Substantial adverse change" is ". . . physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired [Public Resources Code §15064.5(b)(2)].

While alteration of the setting of an archaeological site that is eligible only for its information potential may not affect the site's significant characteristics, alteration of a property's location (*viz.*, removing or damaging all or part of the site) may have a significant adverse effect. CEQA's Guidelines §15126.4(b)(3) state, "Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature." The guidelines further state that preservation in place is the preferred manner of mitigating impacts, and that preservation ". . may be accomplished by, but is not limited to, the following":

1. Planning construction to avoid archaeological sites;

2. Incorporation of sites within parks, greenspace, or other open space;

3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site.

4. Deeding the site into a permanent conservation easement.

CEQA guidelines state, "when data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken" [CEQA Guidelines §15126.4(b)(3)(C)]. However, "data recovery shall not be required for a historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource . . ." [CEQA Guidelines §15126.4(b)(3)(D)].

CEQA also requires planning agencies to consider the effects of a project on "unique archaeological resources." If an archaeological site meets the definition of a unique archaeological resource (Public Resources Code §21083.2), then the site must be treated in accordance with the special provisions for such resources, which include time and cost limitations for implementing mitigation.

California law also protects Native American burials, skeletal remains and associated grave goods regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains (Health and Safety Code §7050.5, Public Resources Code §5097.94 *et seq.*).

PROJECT DESCRIPTION

The City of Sonora's Dragoon Gulch Master Trails Plan proposes the build-out of the Dragoon Gulch Recreation Area. Approximately 35 acres has already been developed with a network of trails. The Trails Master Plan calls for the extension of existing trails throughout an additional 67 acres recently purchased by the City. The proposed trail configuration would extend the current trail network to approximately 7.5 miles. Also proposed is a new 20-stall parking lot at a new trail head off Racetrack Road, which may be used as a staging area for the trails' users. The Plan incorporates connections to and from adjacent neighborhoods and Sonora High School. Construction would be phased, depending on the availability and source(s) of funding.

Phase 1 would consist of a portion of the new trail extending from the existing trail network at the summit.

Phase 2 would be the main trail build-out. This phase would include the remainder of the trail network, including natural surface trail construction and signage.

Phase 3 would be construction of the "Fun Run" undulating portion of the trail system at the southwest area of Dragoon Gulch.

Phase 4 would include construction of the amenities and parking area to completed built-out of the master plan.

A significant portion of the trails must meet accessible codes to provide access to users of all abilities. The accessible portion of the trails includes a summit opportunity and a path with a less than five percent grade to a public right-of-way along Racetrack Road. Rest areas with a minimum area of five feet by five feet would be provided at 200 foot maximum intervals along the accessible trail sections to allow for passing and intermittent stops. Benches would be ultimately provided at intervals no greater than 600 feet. One new accessible parking stall would be provided within the proposed 20-stall parking lot. An accessible path of travel would be provided to all facilities, including the restroom, drinking fountain, picnic area and trailhead. Construction of the trail will result in slope disturbance above and below the trail to varying degrees.

AREA OF POTENTIAL EFFECTS(APE)

The Area of Potential Effects (APE) for cultural resources would be the actual trail routes, the existing access road and a second proposed new road that would connect Racetrack Road with the proposed 20-stall parking area at the proposed new trailhead. Conceptually, the plan would include trail connections to and from adjacent neighborhoods and these connections, as well as any staging areas and access other than by existing roads would be included as elements of the APE (see Figures 3 and 4, above).

Dragoon Gulch is a seasonal water course with headwaters approximately 2,000 feet north of Racetrack Road. Insofar as the existing access road and a second, proposed road would connect with Racetrack Road, the latter marks the north boundary of the APE. Land use surrounding the Dragoon Gulch Trail area includes primarily residential and some commercial uses. The western boundary of the APE is a residential neighborhood along Leland Drive and Rosebud Road. The proposed project designates an approximate 80 foot buffer between the natural surface trails and the neighborhood fence boundaries. The east side of the APE is also primarily residential bordered by Dragoon Circle and Arbona Circle North. On the southeast side of Dragoon Gulch is an existing park entrance off Alpine Lane. The south boundary of the proposed trails system is currently undeveloped.

Dragoon Gulch is densely overgrown with underbrush, primarily manzanita and poison oak. Oak woodlands and oak Chaparral ecotypes predominate in the natural setting (see Figures 5-8, Appendix A: Photographs).

The vertical APE would be the maximum depth of anticipated excavation estimated at

six feet for construction of the new paved driveway from Racetrack Road to the proposed parking area. Construction of the new road would require grading a new bench in the existing slope above the existing driveway. Such construction may include short sections of gabion retaining structure no greater than six feet high.

LITERATURE REVIEW

The literature review included a records search by the Central California Information Center, California Historical Resources Information System, a review of relevant previous studies and historic maps, as well notes from previous discussions with Tuolumne County's most revered historian, Carlo M. De Ferrari.

Historic Context

Identification, evaluation and treatment of historic properties are most reliable when there is an understanding of the relationship between those properties and other similar cultural resources. Standard I of the Secretary of the Interior's Standards and Guidelines defines the concept of "historic context" as information on aspects of history, architecture, archaeology, engineering and culture that are collected and organized to define those relationships (National Park Service 1983:44717).

Historic contexts are based on cultural themes, their geographic extent and time period. Any particular historic context describes the "significant broad patterns of development in an area that may be represented by historic properties." Prehistory, Central Sierra Miwok ethnography/ethnohistory, historic mining and post-World War II residential architecture are the principal contexts for cultural resources known to exist in Dragoon Gulch or that may be discovered during construction of the proposed trails project.

Prehistory

As archaeologists have intensified their study of Central Sierra prehistory, the American public has been rewarded with a more precise understanding of prehistoric cultures. In Fitting's 1979 report on the first phase of archaeological work for the New Melones Reservoir project, the archaeologist concluded that Man's entry into the Sierra Nevada was relatively late in prehistory (after 2000 B.C.) (Fitting 1979:2). However, Moratto's 1984 synthesis of California archaeology pushed back Central Sierra prehistory to 6500 B.C. (Moratto 1984:313). Early settlement in the Central Sierra was also demonstrated by finds at the Clarks Flat site, CA-CAL-S342 (Peak and Crew 1990).

A number of early finds are linked typologically to the Western Pluvial Lakes Tradition, an adaptation of hunter-gatherers to lake, marsh and grassland habitats along the eastern side of the Sierra Nevada as early as 9000 B.C. (Moratto 1984:90-91). The development of the Western Pluvial Lakes Tradition and its regional variants may, as Moratto suggested, correspond to the emergence and initial differentiation of Hokan languages (1984:544).

The succeeding Archaic Period is divided by archaeologists into three sub-periods:

lower, middle and upper (Fredrickson 1994:100, Figure 9.1). During the Lower Archaic, between 8550 and 5550 B.C., many of the pluvial lakes in California became dry playas as a result of the gradual warming and drying trend at the end of the last Ice Age. Early milling stone complexes of this sub-period have been identified by scholars at a number of sites in southern and northern California. Seed gathering, inferred from the use of milling stones, was an arid land adaptation. Speakers of Hokan languages probably brought the concept of milling stones to California, since scholars recognize that Hokan peoples were in the regions of the western United States where deserts first appeared after the end of the last Ice Age (Moratto 1984:546-547; Rosenthal *et al.* 2007:151).).

The Middle Archaic, dating between 5550 and 550 B.C., marked the beginning of the fluorescence of aboriginal cultures in California's Great Central Valley. The Windmiller Pattern of the Middle Archaic has been thought by archaeologists to represent immigrants from the Great Basin-Columbia Plateau region during the Altithermal period of intensified climatic warming in some areas, a hypothesis that is now supported to an extent by DNA studies (Johnson *et al.* 2012:67).

Though concerted exploration of the Sacramento Delta's ancient village mounds was well underway by the 1930s, it was not until much later that scientists began taking a systematic look at Central Sierra archaeology.

Between 1968 and 1981, the federal government funded survey and excavations at sites along the Stanislaus River. The New Melones Reservoir project resulted in the documentation of 700 archaeological sites; 90 sites were subject to sample excavations, a few were intensively dug. As a result of this work, the local sequence of prehistoric cultures was found to span 8000-9000 years.

Archaeology and linguistic reconstructions indicate that Utian peoples (including proto-Miwokan and, later, Yokutsan-speakers) entered the Lower Sacramento Valley probably from the northwest Great Basin/Columbian Plateau region during the mid-Altithermal period, around 2500 B.C. Archaeologists recognize this intrusion as the early Windmiller Pattern, which is really an integrative concept with no specific time period implied (Windmiller Pattern traits such as large stemmed and concave base projectile points, stone pestles, manos and metates, as well as a specific range of mortuary customs, may occur earlier in one region and later in another) (Fredrickson 1994:97).

Between 1000 and 500 B.C., coinciding with Medithermal climatic changes, Yokutsan groups moved into the San Joaquin Valley and Central Sierra foothills from the Sacramento Delta region. The Windmiller Pattern in the Central Valley and the Crane Flat Complex in the Sierra were seen by Moratto as evidence of the Yokutsan expansion *circa* 1000 to 500 B.C. The later displacement of Yokuts by Sierra Miwok groups could be represented in Moratto's Madera Phase (post-A.D. 1500), and in Yosemite by the Mariposa Phase (post-A.D. 1200). These late Miwokan complexes are distinguished by light projectile points, use of bow and arrow, bedrock mortars, cobble pestles, steatite vessels and clam shell disk beads.

Researchers on the New Melones Reservoir project discovered evidence of population replacement as well as changing adaptations. Miwok expansion in the area was dated to the period after A.D. 1400. The archaeologists also found evidence that Native American use of traditional foods, milling equipment, houses, mortuary practices and ceremonial

structures persisted in areas of refuge until the 1880s (Moratto 1984:312-313).

Archaeological work sponsored by the U.S. Forest Service resulted in a great additional amount of field survey and some excavation in the Central Sierra. As a result, researchers have documented high Sierran seasonal camp sites characterized by lithic scatters and few bedrock mortars, and Transition Zone settlements with middens, numerous bedrock mortars and remnants of structures (Moratto 1984:314).

In his mid-1960s study of mortuary caves in the Central Sierra region, McEachern concluded that the use of mortuary caves represented part of a widespread cultural pattern dating from the Early Horizon (Middle Archaic Period, 3000-500 B.C.) and ending with the settlement of Miwok-speaking people after early Phase I of the Late Horizon (post-A.D. 1100) (McEachern 1968:83).

Moratto indicated that one of the best known mortuary caves in the Central Sierra is Moaning Cave (CA-CAL-13). Moaning Cave was first explored in 1851 by J.B. Trask, who noted the presence of human bones. A century later, University of California scholars dated the mortuary use of the cave to the period 1000 B.C.-A.D. 500 (Moratto 1984:305). In the mid-1960s, excavations by California State University, Sacramento at Pinnacle Cave on the east side of the Stanislaus resulted in finds of cordage, basketry and wood, perishable items that do not survive in open sites.

McEachern's reconnaissance of McNamee Cave produced finds dating *circa* A.D. 900-1100, which represents the last known period of use for Central Sierra limestone caves as ossuaries. McEachern named this terminal period of mortuary cave use, the "McNamee Phase" (McEachern 1968:83).

A recent updated synthesis of Central California archaeology notes little new information to change the above broad overview due to few new investigations other than surface surveys and the inadequacy of older collections in meeting the needs of current research objectives. However, researchers have taken the cultural periods, above, and updated the time span of each period based on new radiocarbon determinations adjusted with modern calibration curves (Rosenthal *et al.* 2007:150):

Paleo-Indian (11,550-8550 cal B.C.)
Lower Archaic (8550-5550 cal B.C.)
Middle Archaic (5550-550 cal B.C.)
Upper Archaic (550 cal B.C.-cal A.D. 1100)
Emergent (cal A.D. 1100-Historic)

Ethnography/Ethnohistory

Miwok-speaking people inhabited the Central Sierra at the time of initial European-American contact. Fitting suggested that the native population of the region was between 2000 and 5000. Population density was estimated between 0.45 and 0.7 per square kilometer (Fitting 1979:4).

Anthropologists have asserted that the basic political unit of the Sierra Miwok was the tribelet. Ranging in population from 100 to 300 persons, each tribelet owned a specific

territory along with its resources. And each tribelet was represented by several distinct settlements, each of which was identified with and named after the local lineage. Kroeber identified three Miwok villages in the Sonora vicinity: *Akankau-nchi, Kuluti and Pota* (Kroeber 1925: 445, Plate 37).

The principal village usually included an assembly house, which was the site of religious ceremonials important to members of the tribelet. The assembly house was generally a large semisubterranean earth lodge supported by four center posts around a fire hearth. Smoke escaped through a hole in the roof directly overhead. A circular brush structure was used during summer months. The summer structure was much simpler in design and smaller than the earth lodge. In the historic period, the assembly house was constructed of wood and roofed with shakes. Living quarters were conical structures covered with bark slabs. Other structures included acorn granaries, a conical house built over bedrock mortars for shelter during inclement weather and a conical sweathouse (Levy 1978:408-410).

Central Sierra Miwok people were hunter-gatherers. Deer were hunted both by individuals and communally. Rabbits were taken by net into which they were driven by a number of hunters. Grizzly bear and black bear were hunted by large parties of a dozen or more. Traps and snares were used by Miwok-speakers for small game such as quail. Ducks and other waterfowl were captured with nets. River fishing included the use of dip nets, seines, casting nets, spears and hooks.

Acorns were the main vegetable staple. From acorns, Miwok-speaking people made soup, mush, biscuits and bread. Bread was made by placing freshly leached acorn meal on a hot stone, then turning it as it baked. Grass seeds, tubers and other foods such as buckeye nuts were also gathered and eaten (Levy 1978:404-405).

European-American settlement of California seems to have had little direct effect on the Central Sierra Miwok-speakers until 1848 and the gold rush (Fitting 1979:9). However, there appears to have been some indirect effects, such as increases in population during the first part of the 19th century with acceptance of Miwok and Yokuts refugees from the missions. Introduced diseases and military engagements apparently resulted from this interaction between valley and Sierra groups.

The gold rush brought with it destruction of the native way of life. By 1852, Fitting noted that Native Americans were rarely seen in the European-American settlements. By the turn of the century, total population of the entire eastern Miwok declined to 700. Traditional trade systems, the ceremonial system and the entire social structure collapsed because, according to Fitting, it could not be maintained by the reduced population (1979:10).

While Fitting concluded that a surprising number of traditional structures have survived to the modern era, Levy indicated that the recent periods in Miwok history remain unstudied (*cf.* Fitting 1979:11 and Levy 1978:413).

History

Local history begins with the gold rush. In Tuolumne County, the rush started in early

summer, 1848, when a party of Philadelphia emigrant miners discovered gold on Woods' Creek (De Ferrari 1963:53; Windmiller and De Ferrari 1996). The discovery of 1848 spurred settlement of the first towns in Tuolumne County (De Ferrari 1963:67).

Pushing up Woods' Creek, a group from Sonora, Mexico discovered rich diggings at what is now Sonora. The men built *ramadas* in the upper part of town, which became *Sonorita* or "Little Sonora." A rival group led by Charles R. Scott camped in the south part of what is now Sonora named, "Scott Town." The town of Sonora grew quickly with a mixed population, mostly Mexican. In the early years, it was a trading center as well as a mining camp, built mostly of brush houses and wattle and daub (De Ferrari 1963:55).

In March, 1850, three miles north of Sonora, a company of miners returning to Woods' Crossing (Jamestown) from Calaveras County, discovered gold at the site of Columbia where Mexicans were already at work (De Ferrari 1963:116; 119). Known first as "Hidreth's Diggings" after the same company of American miners, the site became "Columbia, Gem of the Southern Mines," one of the richest and most famous placer-mining districts in California (Clark 1970:39).

Other important discoveries included Mormon Creek, Jackass Gulch, Indian Gulch and Soldier Gulch, though the latter two were considered inferior to Jackass Gulch and Mormon Creek. Closer to Sonora, Peppermint Gulch, two miles west of Sonora was also discovered in 1848 and found to be quite rich (De Ferrari 1963:62-63).

Jackass Gulch in particular yielded not only placer gold, but a quartz lead of two-thirds gold. It was reported that the gulch was made up of literally thousands of small veins. The gulch became the richest of the early mines (De Ferrari 1963:62).

There has been some disagreement about the origin of the names, "Dragoon Flat" and "Dragoon Gulch." During either the summer of 1848 or at least before the summer of 1849, a party of U.S. Dragoons and a group of artillery soldiers settled on Dragoon Flat, which was the lower part of Shaws Flat. Soon after, they discovered gold in Dragoon Gulch. The gulch was immensely rich. The artillery soldiers soon discovered Soldier's Gulch–also exceedingly rich in gold (De Ferrari 1963:64).

A more recent study by Carlo De Ferrari concluded that the dragoons of Dragoon Flat and Dragoon Gulch were U.S. cavalry soldiers either on furlough or deserters from Camp Stanislaus late in 1849 (De Ferrari 1995:3).

According to De Ferrari, the first ditch water was transported to Dragoon Gulch from Sullivan's Creek starting in February, 1851. Prior to the advent of ditch water, the miners carted rich gravel as far as two miles northeast for washing at the springs of Springfield. Some miners apparently dug wells or used water from springs at the head of Dragoon Gulch (De Ferrari 1995:4).

While the Sullivan Creek Water Company's ditch provided the first local ditch water, it was followed in 1852 by Tuolumne County Water Company. Other purveyors of ditch water included the Columbia and Stanislaus River Water Company, Street's Ditch and the Phoenix Water Company (De Ferrari 1995: 4).

Shaw's Flat, actually the north portion of Dragoon Flat, was named for Mandeville Shaw

who was elected Alcalde in December, 1852. The locality grew until, in 1856, Shaw's Flat boasted of a population of 2,000 (De Ferrari 1995:4).

Dragoon Gulch was mined by various "companies" of miners. The extreme upper portion of the gulch apparently produced poorer returns than the downslope portion of the gulch. The strike of rich pockets was generally advertised over the failures. By May, 1853, miners reported making two ounces of gold per day in shallow diggings, while another group reported two to six ounces per day. The influx of more miners with less "pay dirt" to work led to the formation of the Shaws Flat Mining District in August 1854. Rules adopted by the miners included the limitation of claims to 100 square feet and rectangular in shape and one claim for each claimant worked at least one day in three (De Ferrari 1995:4).

De Ferrari noted that there were a number of reservoirs, ditches and flumes in the Dragoon Gulch area. De Ferrari speculated that some evidence of these features may still remain. For example, the Denton and Keeley Flume, which was owned by John Denton and Levi W. Keeley, transported water from Shaws Flat to Jackass and Dragoon gulches according to deeds dated May 5, 1863 and April 5, 1865 (De Ferrari 1995:5).

In addition, De Ferrari noted that Charles Tupper and wife, Amelia, conveyed title to land, reservoirs and the Corver Ditch to Thomas Gilman in 1868. The Corver Ditch originated from Dragoon Gulch opposite the mouth of Portugese Gulch and conveyed water to one of the reservoirs. A second ditch originated at a point 40 yards below the mouth of Gilman's flume and transported water to another reservoir. De Ferrari unfortunately found that the description of such improvements in water conveyance were stated in such general terms that the actual site of the ditches and reservoirs may never be unequivocally identified (De Ferrari 1995:5).

In addition to water conveyance features, De Ferrari also explored records on quartz mining. In his research, De Ferrari found that J. B. Bryant, E. Delano and G. Hussey located a vein in the center of Negro Gulch, which was probably located south of Dragoon Gulch proper and may have been an east branch of Dragoon Gulch. Filed in 1857, the claim apparently ran northeasterly for a distance of 750 feet (De Ferrari 1995:5).

Another quartz claim was filed in 1869 by William Ricketts, Joseph Hudson, Charles Heer, Ed Barthrop and Andrew Gerlach. Located 1200 feet east of Dragoon Gulch, the claim was 750 feet in length and 300 feet in width on each side of the vein. It was during this same time that a tunnel was driven along the vein (De Ferrari 1995:5).

By 1884, the north and middle parts of Dragoon Gulch were owned by Nicholas Goffinet. Portions of the Goffinet property were later sold to Lucy L. Shine and T. H. Conlon. By the early 1900s, the middle of Dragoon Gulch was owned by the McCormick Company (Marvin 1995).

At the apex of a ridge towards the north end of Dragoon Gulch, an ex-policeman moved to Sonora from the Central Valley and built a ranch-style residence between 1945 and 1946. By 1948, G & L Land Company owned a significant portion of Dragoon Gulch. By 1965, G & L Land Company retained its ownership. The "hill" apparently burned in July, 1965, which may account for the impenetrable brushy nature of Dragoon Gulch,

today (*cf.* Marvin 1995:6).

Records Search Results

On September 24, 2014, the Central California Information Center, California Historical Resources Information System completed a records search for the project site encompassing the Area of Potential Effects and a one-eighth mile radius.

Information Center staff identified 10 previously noted but not recorded archaeological resources located along the Dragoon Gulch water course adjacent to the east side of the project site and trails APE. The archaeological resources included four locations of placer and quartz mining, a rough dirt road supported in places by rock walls, a trail in current use, and four ditch segments.

The 10 resources were identified in a 1995 report by Judith Marvin: *Preliminary Cultural Resource Investigations for the Glover Estates Planned Development, Sonora, California* (Marvin 1995).

Two additional studies and two additional cultural resources were identified by information center staff within the one-eighth mile radius of the current project site/APE. Staff found no listings for the records search area in the Office of Historic Preservation's Historic Properties Directory, Archaeological Determinations of Eligibility, California Inventory of Historical Resources or the Caltrans Bridge Survey.

Information center staff noted that the project area lies within the City of Sonora designated as "P-55-5547" in the California Historical Resources Information System.

The General Land Office Plat to 1871 for Township 2 North, Range 14 East illustrates the end of one road in the project area (northeast quarter of Section 35. The 1891 Sonora 1:125,000 quadrangle illustrates the town of Sonora and roads in the vicinity of the project area. The 1948 and 1949 Sonora Quadrangles illustrate a house and access road in the vicinity of present-day 11291 Racetrack Road within the project site/APE (see Appendix B: Records Search Results).

NATIVE AMERICAN COORDINATION

On October 6, 2014, the Native American Heritage Commission responded to a request for a sacred lands file search and list of Native American contacts. Commission staff reported that the file search failed to indicate the presence of Native American cultural resources in the immediate project area. However, staff recommended that other sources should be contacted for information regarding important sites. To this end, staff included with the letter report, a list of Native American contacts. The list consists of the following:

Ms. Rhonda Morningstar Pope, Chairperson, Buena Vista Rancheria;
Mr. Lloyd Mathiesen, Chairperson, Chicken Ranch Rancheria of Me-Wuk Indians;
Ms. Melissa Powell, Cultural Resources, Chicken Ranch Rancheria of Me-Wuk Indians;
Ms. Sally Smith, Tribal Administrator, Chicken Ranch Rancheria of Me-Wuk Indians;

Mr. Kevin Day, Chairperson, Tuolumne Band of Me-Wuk Indians;
Mr. Stanley Cox, Cultural Resources Director, Tuolumne Band of Me-Wuk Indians;
Ms. Reba Fuller, Tuolumne Band of Me-Wuk Indians

The sub-consultant mailed a letter dated October 7, 2014 to each of the above individuals. The letter described the proposed project and included a map showing the location of the project. The letter indicated that the Native American Heritage Commission provided the sub-consultant with the name and contact information of each on the list. The sub-consultant asked for any information on known or suspected cultural resources of importance to Native Americans that may be impacted by the proposed project. No responses were recorded.

On December 8, 2914, the sub-consultant attempted to reach each contact by telephone. No response was received from Mr. Kevin Day or Ms. Fuller. However, the sub-consultant left a detailed voice mail message for each, though no response has been received to date.

An attempt to contact Mr. Lloyd Mathiesen, Ms. Melissa Powell and Ms. Sally Smith of Chicken Ranch Rancheria was unsuccessful as those telephones had been disconnected.

The call to Ms. Morningstar Pope was referred to Dr. Roselyn Lwenya, Environmental Director, Buena Vista Rancheria. The sub-consultant left a detailed message for Dr. Lwenya. However, no response has been received to date.

There was no response to the call to Mr. Stanley Cox of the Tuolumne Band. However, the sub-consultant left a detailed message for Mr. Robert Cox, who apparently is the Cultural Resources Director for the Tuolumne Band. No further responses have been received to date (see Appendix C: Native American Coordination).

FIELD METHODS

The pedestrian field inspection was conducted on October 30, 2014. Due to dense brush over the entire project area, particularly manzanita and poison oak, the City agreed earlier to clear the proposed trail routes of the brush to facilitate field inspections of the trail routes for archaeological resources, as well as for other studies. The clearing procedure consisted of using chainsaws to cut back the brush along the trail routes without disturbing the ground. Each trail was then marked with its own distinctive color of plastic flagging. The APE of the trails included the proposed ground disturbing width of the trail system. Field inspection aimed to encompass a 15 meter transect along each trail route, which often meant the trail route and the visible radius on either side of the trail route, which was variable depending on the density of the brush.

The north end of Dragoon Gulch encompasses the broadened APE, which included the route of the proposed new road, old road, picnic area, parking stalls, restroom and trailhead at the summit off Racetrack Road. Here, most of the brush had been removed in years past probably to help protect the existing house and outbuildings from wildfires. This area was inspected along random transects approximately 15 meters apart or less. The visible trail route to view and interpretive areas located in the western portion of the same summit and marked with pink and yellow flagging was also walked.

The residence and outbuildings, as well as the all identified archaeological resources within the APE were recorded on DPR 523 series record forms distributed by the California Office of Historic Preservation. Ground visibility in and around this northern portion of Dragoon Gulch was fair. Leaf litter was the major hindrance. In fact, heavy duff covered approximately 90 percent of what was surveyed across Dragoon Gulch.

The northwest portion of Dragoon Gulch located below the summit was extremely steep with no flagged or brush-cut indication of the trail(s). The grade varied between eight and 15 percent in this area.

The central portion of the area encompassing the trails APE was heavily flagged with close trail switchbacks. It was difficult to determine one trail route from another. However, this portion of Dragoon Gulch was inspected from flag to flag rather than by following a specific trail route. In some locations, the frequency of flagging diminished and dead-ended. Here, steps were retraced to a point where flagging was more consistent.

In the south central portion of the area encompassing the trails APE, no flagging could be found. In the southwest corner of the area encompassing the trails APE, the "Fun Run" trails had not been cut, although a diagonal "trail" was cut through the dense brush southeast to northwest. The diagonal was inspected, however, the "Fun Run" trail route was not cleared and could not be inspected for cultural resources.

Most of the east portion of the area encompassing the trails APE from north to south abuts the area of existing trails and Marvin's 1995 study. That portion of the trails APE adjacent to Marvin's study area was probably the most rugged portion of the trails APE with few proposed shortcuts and a proposed downhill trail.

The field team was led by Ric Windmiller, M.A., with more than 38 years experience directing archaeological field surveys and excavations. Windmiller meets the Secretary of the Interior's professional qualifications standards in prehistoric and historical archaeology. He is a former staff archaeologist with the University of Arizona, University of Colorado and National Park Service Western and Southwest regions.

The field team included Katherine Vallaire, M.A. with more than eight years experience in research, documenting historic and prehistoric archaeological sites, as well as historic buildings and structures. Ms. Vallaire meets the Secretary of the Interior's Professional Qualifications standards in prehistoric and historical archaeology as well as history/architectural history.

Cathryn Chatterton provided technical assistance. Ms. Chatterton has 10 seasons field experience in archaeological surveys and excavations.

DESCRIPTION OF CULTURAL RESOURCES

Five historic archaeological sites were identified within the defined Area of Potential Effects. Four buildings 50 years old or older were also identified within the APE. No Native American cultural resources were identified (see Appendix D: Confidential Location of Cultural Resources and Appendix E: Confidential Record Forms).

Prehistoric Archaeological Resources

No prehistoric archaeological resources were identified during the present study.

Historic Archaeological Resources

Field No. DG-1 (Quartz Prospect)

This minor historic archaeological resource is a cluster of quartz prospect pits. The principal feature is a trench about 20 feet long, four feet wide and three feet deep. Tailings are piled on the north side of the trench. A Shallow depression on the west side of the trench is about five feet long and four feet wide, and less than one foot deep. The entire site is about 30 feet northeast-southwest and 20 feet northwest-southeast including tailings. The site is located adjacent to a trail (see Figure 9, Appendix D: Confidential Location of Cultural Resources).

Field No. DG-2 (Quartz Prospect)

This minor historic archaeological resource is a small quartz mine shaft with an associated small tailings dump. The site measures 42 feet east-west and 33 feet north-south. The approximately 20 feet deep shaft is surrounded by a fence of metal t-posts and sheep wire. The tailings lie on the east side of the shaft. A proposed trail route crosses a portion of the tailings dump (see Figure 9, Appendix D: Confidential Location of Cultural Resources).

Field No. DG-3 (Quartz Prospect)

This minor historic archaeological resource is the collapsed portal of a small mine tunnel and a tailings dump. The site is located on the north side of the same hill on which field designation DG-1 and DG-2 are situated. The site lies about 20 feet (vertical elevation) below the hill's summit. A broad, 12 foot wide trench leads from the flat topped tailings dump to the mine portal. From tunnel portal to the tailings dump is about 40 feet. The entire site measures approximately 50 feet north-south and 15 feet east-west. A proposed trail route crosses a portion of the tailings dump.

Field No. DG-4 (Mine/Quarry)

This historic archaeological resource was described in the 1995 *Preliminary Cultural Resource Investigations for the Glover Estates Planned Development, Sonora, California* by Judith Marvin of Foothill Resources Ltd. with contributions by Shelley Davis-King and Carlo De Ferrari. Marvin described the site as including a pit, an extensive area of waste rock piles and a trash deposit of tin cans, bucket and wash tub. Identifying the hardrock mined area as "Site 3," Marvin indicated that the majority of the site was located west of the Glover Estates project area (Marvin 1995:7).

The proposed Glover Estates project area became the site of the first phase of trails construction by the City of Sonora, now noted as the area of existing trails in Figure 3, above. West of Marvin's 1995 project area, the westernmost portion of Marvin's "Site 3,"now labeled "Field Number DG-4," was encountered during the present study in the area of the proposed Downhill Trail.

Site DG-4 includes within its site boundary a prospect pit, tailings pile, a possible area of hydraulic mining, an old road segment previously identified elsewhere by Marvin as "Site 5," and a ditch segment previously identified elsewhere by Marvin as "Site 7"). Marvin's sites 5 and 7 loop into and exit the current APE at site DG-4. Located on a slightly sloping terrace, site DG-4 is surrounded by oaks and manzanita. A proposed trail route crosses the site; an existing paved trail also crosses the historic site.

Field No. DG-5 (Ditch Segment)

This minor historic archaeological resource is an approximately 25 foot long segment of a small earthen ditch. The top width is approximately four feet. Depth of the partly in-filled ditch is one foot. Water once carried by the ditch ran in a northeasterly direction towards the creek that marks the center of Dragoon Gulch. The ditch segment is located at one of the proposed trails.

Historic Buildings and Structures

11291 Race Track Road

This resource consists of a California Ranch style residence and its associated outbuildings (horse barn, shed and garage). The residence has an L-shaped plan with an inset front porch. Siding includes horizontal shiplap and vertical board and batten. The roof is a salt box style roof covered in composite shingles with wide overhanging eaves. A large brick chimney protrudes from the roof's ridge. The inset porch contains two picture windows, a front door, brick cladding, and a brick patio and path. Other fenestration includes hung windows with screens.

The horse barn was built on a rectangular plan. The low-pitched gable roof is clad in metal sheeting. Siding is board and batten. The roof has overhanging eaves supported by posts. The south third of the building was constructed on wood posts with a wrap-around porch.

The shed was built on a rectangular plan with a salt box style roof covered in corrugated metal. Siding is vertical flush T-111 plywood. The shed rests on a concrete foundation. The south elevation has a shed door.

The garage contains a rectangular plan measuring approximately 16 by 20 feet. The garage has a moderately pitched roof covered in composite shingles and original shiplap siding. The majority of the garage door opening is covered with a tarp. The shed may be impacted by the proposed project. The horse barn may converted to a new use.

EVALUATION

Generally, a historic site, object, building, structure or district is eligible for listing on the National Register of Historic Places if it is 50 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling and association, and meets at least one of the following criteria (National Park Service 1991):

A. Association with events that have made significant contributions to the broad patterns of United States history.

B. Association with the lives of people important in United States history.

C. Embodies the distinctive characteristics of a type, period, or method of construction; or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components may lack individual distinction;

D. Has yielded or is likely to yield information important in prehistory or history.

National Register eligibility is equally dependent on the condition or integrity of the cultural resource. Integrity, in this sense, is the authenticity of the cultural resource's historic identity, meaning the survival of those physical characteristics that existed during the historic or prehistoric period from which it dates. The integrity of archaeological resources is generally based on the degree to which the remaining cultural deposit, artifacts or features can provide information important to our understanding of history or prehistory.

Integrity is a composite of seven qualities, some of which are more germane than others, depending on the type of cultural resource under evaluation and the criterion of National Register eligibility for which the evaluation is made. The aspects of integrity are: location, design, setting, materials, workmanship, feeling and association (National Park Service 1991:4).

Under the California Environmental Quality Act (CEQA), historical resources are recognized as a part of the environment [Public Resource Code §21001(b), §21083.2, §21084(e), §21084.1]. A "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or important in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (Public Resources Code §5021.1).

The California Register is an authoritative listing and guide for state and local agencies and private groups and citizens in identifying historical resources. The criteria used for determining the eligibility of a cultural resource for the California Register are similar to those developed by the National Park Service for the National Register of Historic Places. However, criteria of eligibility for the California Register were reworded to better reflect California history.

Any building, site, structure, object or historic district meeting one or more of the following criteria may be eligible for listing in the California Register:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

2. It is associated with the lives of persons important to local, California, or national history;

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or

4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Eligibility for the California Register also depends on the integrity, or the survival of characteristics of the resource that existed during its period of significance. Eligible historic resources must not only meet one of the above criteria, but also they must retain enough of their historic character or appearance to convey the reasons for their importance, or retain the potential to yield significant scientific or historical information or specific data.

Like the process of evaluating historical resources for National Register eligibility, California Register evaluations include the consideration of seven aspects of integrity: location, design, setting, materials, workmanship, feeling and association. The evaluation of integrity must be judged with reference to the particular criterion or criteria under which a resource may be eligible for the California Register.

Most often, historical resources eligible for the California Register will be 50 years old or older. However, the new implementing regulations stipulate that "a resource less than fifty (50) years old may be considered for listing in the California Register if it can be demonstrated that sufficient time has passed to understand its historical importance." If an archaeological resource does not meet the definition of a "historical resource," it may meet the definition of a "unique archaeological resource" under Public Resource Code §21083.2. An archaeological resource is "unique" if it:

1. Is associated with an event or person of recognized significance in California or American history or recognized scientific importance in prehistory;

2. Can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions;

3. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;

4. Is at least 100 years old and possesses substantial stratigraphic integrity;

5. Involves important research questions that can be answered only with archaeological methods.

Prehistoric Archaeological Resources

No prehistoric archaeological resources were identified during the present study.

Historic Archaeological Resources

Field No. DG-1 (Quartz Prospect)

This minor historic archaeological resource is a small cluster of quartz prospect pits. The principal feature is a trench about 20 feet long, four feet wide and three feet deep. Tailings are piled on the north side of the trench. A Shallow depression on the west side of the trench is about five feet long and four feet wide, and less than one foot deep. The entire site is about 30 feet northeast-southwest and 20 feet northwest-southeast including tailings.

Carlo DeFerrari's "Historical Overview" of Dragoon Gulch describes several County records pertaining to local quartz veins. First is the 1857 claim filed by Bryant, Delano and Hussey in the center of Negro Gulch about 100 yards from its juncture with Dragoon Gulch. De Ferrari went on to point out that the location of Negro Gulch was uncertain, but located south of Dragoon Gulch proper (DeFerrari 1995:5).

Second was a quartz claim taken up by Ricketts, Hudson Heer, Barthrop and Gerlach in 1869 and located 1200 feet east of Dragoon Gulch (DeFerrari 1995:5).

The age of the prospect identified as Field No. DG-1 is unknown, but may date back to the 1860s-1870s. The site is obviously the result of mine exploration or prospecting judging from the slim tailings and shallow workings. The significance of prospects is probably best measured by their association with a particular period of boom or bust phase in the mining history of a locality or region. Another potential for measuring significance may be association with an adjacent camp or if equipment can be found in association with the prospect.

For National Register eligibility under Criterion A or California Register eligibility under Criterion 1 (association with important events or themes), the most applicable theme may be engineering, commerce or community development. However, such association would be weak as the prospect lacks integrity of materials and association. Materials used in developing the prospect were not found at the site. Lacking a specific association with a particular historic period, or with equipment that was used to develop the prospect, it is unlikely that the prospect is eligible for the National Register/ California Register as an individual property under Criterion A/1.

Under Criterion B/2, the site would need to be associated with a person important in history. Also, we would need to ascertain the length and nature of his association with the site and identify other properties associated with that individual. As no such association could be ascertained, the site is not eligible under Criterion B/2.

Under Criterion C/3, a mining property possesses significance most commonly for its architecture or engineering. However, the prospect is not demonstrative of either. Therefore, the site is not eligible under Criterion C/3.

Under Criterion D/4, the site would be eligible if it had the potential to yield important information. Mining properties would be eligible under this criterion if they included standing buildings or structures, surviving machinery, landforms such as tailings, associated trash dumps, foundations or roads. Although the site in question includes tailings, the potential for yielding important information is low based on surface observations. The site does not appear eligible under any National Register or California Register criterion, nor does the site appear eligible as a "unique archaeological resource" under CEQA guidelines.

Field No. DG-2 (Quartz Prospect)

This minor historic archaeological resource is a small quartz mine shaft with an associated small tailings dump. The approximately 20 foot deep shaft is surrounded by a fence of metal t-posts and sheep wire.

Because this particular site has a vertical shaft, the question arises as to whether the site is the result of exploration (a prospect), or the product of initial mine development. Judging by the relatively small tailings dump, the site appears to be a prospect. There is no headframe or other evidence of mine development other than the relatively small diameter shaft.

For National Register/California Register eligibility under Criterion A/1, association with important events or themes, the most applicable themes may be engineering, commerce or community development. However, such association would be weak as the prospect lacks integrity of materials and association. There is no evidence of a headframe or other associated features or structures.

Under Criterion B/2, the site would need to be associated with a person important in history. Also, we would need to ascertain the length and nature of his association with the site and identify other properties associated with that individual. As no such association could be ascertained, the site is not eligible under Criterion B/2.

Under Criterion C/3, a mining property possesses significance most commonly for its architecture or engineering. However, the prospect is not demonstrative of either. Therefore, the site is not eligible under Criterion C/3.

Under Criterion D/4, the site would be eligible if it had the potential to yield important information. Mining properties would be eligible under this criterion if they included standing buildings or structures, surviving machinery, landforms such as tailings, associated trash dumps, foundations or roads. The existing tailings are not extensive and the probability for yielding any information is very low.

The site does not appear eligible under any National Register or California Register criterion, nor does the site appear eligible as a "unique archaeological resource" under CEQA guidelines.

Field No. DG-3 (Quartz Prospect)

This minor historic archaeological resource is the collapsed portal of a small quartz mine tunnel and a tailings dump. Because this particular site has evidence of a tunnel, the question arises as to whether the site is the result of exploration (a prospect), or the product of initial mine development. Judging by the relatively small tailings dump, and even though the tunnel's portal is collapsed and extent of the tunnel is unknown, the site appears to be a prospect. There is no evidence that tailings have been removed to the extent that more than an adit type of prospect could be inferred from the remains.

For National Register/California Register eligibility under Criterion A/1, association with important events or themes, the most applicable themes may be engineering, commerce or community development. However, such association would be weak as the prospect lacks integrity of materials and association. There is no evidence of ore car rails or other associated features or structures such as timbering.

Under Criterion B/2, the site would need to be associated with a person important in history. Also, we would need to ascertain the length and nature of his association with the site and identify other properties associated with that individual. As no such association could be ascertained, the site is not eligible under Criterion B/2.

Under Criterion C/3, a mining property possesses significance most commonly for its architecture or engineering. However, the prospect is not demonstrative of either. Therefore, the site is not eligible under Criterion C/3.

Under Criterion D/4, the site would be eligible if it had the potential to yield important information. Mining properties would be eligible under this criterion if they included standing buildings or structures, surviving machinery, landforms such as tailings, associated trash dumps, foundations or roads. Because the size of the tailings dump is small, it is unlikely that it would yield any information on the age or association of the prospect with specific people or other aspects of local history.

The site does not appear eligible under any National Register or California Register criterion, nor does the site appear eligible as a "unique archaeological resource" under CEQA guidelines.

Field No. DG-4 (Mine/Quarry)

Site DG-4 includes within its site boundary a prospect pit, tailings pile, a possible area of hydraulic mining, an old road segment previously identified elsewhere by Marvin as "Site 5," and a ditch segment previously identified elsewhere by Marvin as "Site 7") (Marvin 1995:7-8). Marvin's sites 5 and 7 loop into and exit the current APE at site DG-4. Located on a slightly sloping terrace, site DG-4 is surrounded by oaks and manzanita. An existing paved trail crosses another portion of the historic site outside the current APE.

Lacking any clear historical association, the site is not eligible for the National Register/ California Register under Criterion A/1. Although the site may represent remnants of more than one period of mining, mere association in a general way with historic events

or trends in the locality is not enough for National Register/California Register eligibility under Criterion A/1.

Under Criterion B/2, the site would have to be associated with an important person. As the site's features could not be associated with a specific individual, the site is not eligible under Criterion B/2.

Under Criterion C/3, the site's features must embody the specific characteristics of a type, period, method of construction. However, no one specific historic period could be associated with the site.

Under Criterion D/4, the site must have yielded or have the potential to yield important information. Upon re-inspection of the site since the 1995 Marvin study, the trash deposit could not be located. Lacking integrity of association and with the integrity of materials in question, the site does not appear eligible for the National Register or California Register under any criterion, nor does the site appear to qualify as a "unique archaeological resource" under CEQA guidelines.

Field No. DG-5 (Ditch Segment)

This minor historic archaeological resource is an approximately 25 foot long segment of a small earthen ditch. For eligibility under Criterion A/1, the unnamed ditch must be found to be associated with a specific important event or important pattern of events. Looking back at the historic context, the ditch does not appear to be associated with any one specific ditch company or ditch system.

De Ferrari's "Historical Overview" of Dragoon Gulch pointed to the Denton and Keeley Flume that served Jackass and Dragoon gulches from records dating to the 1860s. Also, there was the Corver Ditch that extended from Dragoon Gulch to a reservoir. However, De Ferrari pointed out that the location of such ditches may never be established because the descriptions on record are so general (DeFerrari 1995:5). Therefore, to posit any specific association of Field No. DG-5 to any ditch of record would be speculative.

Eligibility under Criterion B/2 would assume that the ditch segment represents the work of an important person or persons. However, there is no evidence to link the ditch segment with a person or persons important in history.

Water systems have been found to be eligible under Criterion C/3 for their engineering or design values. However, the unnamed ditch appears to have been entirely functional as a generic earthen ditch.

Criterion D/4 pertains to information potential. As an earthen ditch, it is most likely that any pertinent information would come from written sources as opposed to the physical properties of the ditch itself. Therefore, it is unlikely that the ditch segment would be eligible for the National Register nor the California Register under any criterion of eligibility. The ditch segment also does not appear to qualify as a "unique archaeological resource" under CEQA Guidelines.

Historic Buildings and Structures

11291 Race Track Road

This resource consists of a California Ranch style residence and its associated outbuildings (horse barn, shed and garage). The residence was built between 1945 and 1946 by an ex-policeman from the Central Valley. The shed was constructed during the same period. Its original shiplap siding was later replaced with T-111 siding. The garage was constructed when the house was built. The original garage door is missing. The central portion of the barn was built during the same period. However, new construction was added to both ends prior to 1980.

The residence, garage, shed and barn were not built during Sonora's initial settlement, nor are they associated with a major event or trend in local or national history. Therefore, they are not eligible for the National Register/California Register under Criterion A/1. Design and construction of the buildings are not associated with an important individual or individuals, nor are the buildings associated in other ways with important persons. Therefore they are not eligible under Criterion B/2.

Ranch style homes originated in the mid-1930s with the work of several creative California architects. The style's popularity increased during the 1940s and became the dominant style of residences across the country in the 1950s and 1960s (McAlester and McAlester2002:479). Although the residence at 11291 Racetrack Road is an early example of the California Ranch, it is not the earliest, nor is it a particularly outstanding example from the area. Therefore, the house is not eligible under Criterion C/3.

For eligibility under Criterion D/4, the buildings at 11291 Racetrack Road must be, or must have been the principal source of information important in history. However, the ranch style architecture is not only well-documented in the literature, there are many examples remaining not only in Tuolumne County, but across the country.

The residence and outbuildings at 11291 Racetrack Road are not eligible for the National Register or California Register under any criterion of eligibility.

POTENTIAL EFFECT

Under federal review, "effect" is defined as "alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register" [36 CFR Part 800.16(I)].

Adverse effects may include reasonably foreseeable effects caused by an undertaking that may occur later in time or removed by distance or cumulative. Adverse effects are found when an undertaking " . . . may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location design, setting, materials, workmanship, feeling, or association: (36 CFR Part 800.5(a)(1).

Under current CEQA regulations, "A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment [Public Resources Code §15064.5(b)]. The significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a resource that convey its historical significance, unless the evidence demonstrates that the resource is not historically or culturally significant [Public Resources Code §15064.5(b)(2)(A-C)].

No historic properties eligible for the National Register, historical resources eligible for the California Register, or "unique archaeological resources" and located within the project APE were identified during the present study. Therefore any impact to the identified cultural resources would have no effect on historic properties, historical resources or unique archaeological resources.

However, it is possible that historic properties, historical resources or unique archaeological resources may be discovered once the proposed project is underway. Any impact on such undiscovered cultural resources may have an adverse effect on those resources.

RECOMMENDATIONS

Because of dense brush across most of Dragoon Gulch and the proposed limited area of disturbance in constructing trails, the Area of Potential Effect was defined as the routes of those proposed trails and the area around the proposed new access road, parking area, picnic area and other facilities at the 11291 Racetrack Road address. Field inspection of the latter area was straight forward with minimal obstructions as most of the area encompassing the proposed road, parking area, picnic and other facilities was clear of understory vegetation.

However, conditions during inspection of the trail routes were varied. In some instances, flagging to show trail routes was missing. In others, flagging for two separate trails were so close together that there was difficulty in following the proposed trail routes. The "Fun Run" system of trails in the southwest corner of the project area was not cleared for inspection. Only a diagonal "trail" was cut through the brush in the "Fun Run" area.

Therefore, the following recommendations are made to reduce any impacts to historic properties, historical resources and unique archaeological resources to a less than significant level:

- An archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric and historical archaeology will monitor brush clearing and ground disturbing activities. If any archaeological resources are identified during such brush clearing and ground disturbing activities, the archaeologist will evaluate the find(s) and if eligible for the National Register, California Register or a unique archaeological resource, then the archaeologist will recommend alternative(s) to avoid the find(s) and/or to mitigate any adverse effects if they cannot be avoided. Work may continue on other parts of the project site while mitigation proceeds.

- In the event of the accidental discovery or recognition of any human remains, there shall be no further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains, until compliance with applicable laws and regulations has occurred.

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APPENDIX A: PHOTOGRAPHS

Figure 5. Dragoon Gulch looking south from caretaker's house.

Figure 6. Dragoon Gulch looking southeast from proposed Racetrack Road trailhead.

Figure 7. Dragoon Gulch looking southwest from proposed trailhead area.

Figure 8. Typical trail route in dense brush.

APPENDIX B: RECORDS SEARCH RESULTS

This appendix may contain information on the specific locations of archaeological resources. This information is not for publication or release to the general public. It is for planning, management and research purposes only. Information on the locations of prehistoric and historic sites are exempted from the California Freedom of Information Act, as specified in Government Code §6254.10.

CENTRAL CALIFORNIA INFORMATION CENTER

California Historical Resources Information System
Department of Anthropology – California State University, Stanislaus
One University Circle, Turlock, California 95382
(209) 667-3307 - FAX (209) 667-3324

Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties

9/24/2014

Records Search File No.: 9104/O
Access Agreement: #50
Project: Dragoon Gulch Trail

Ric Windmiller, Consulting Archaeologist
2280 Grass Valley Hwy #205
Auburn, CA 95603

Dear Mr. Windmiller:

The Central California Information Center received your record search request for the project area referenced above, located on the Sonora USGS 7.5' quadrangle in Tuolumne County. The following reflects the results of the records search for the project area and a 1/8 mile radius:

As per data currently available at the CCaIC, the locations of resources/reports are provided in the following format: ☐ custom GIS maps ☐ shapefiles ☒ hand-drawn maps

Summary Data:

Resources within project area:	10 Historical Resources that have been noted but not recorded
Resources within 1/8 mi radius:	2
Reports within project area:	1
Reports within 1/8 mi radius:	2

Resource Database Printout (list):	☐ enclosed ☒ not requested ☐ nothing listed
Resource Database Printout (details):	☐ enclosed ☒ not requested ☐ nothing listed
Resource Digital Database Records:	☐ enclosed ☒ not requested ☐ nothing listed
Report Database Printout (list):	☐ enclosed ☒ not requested ☐ nothing listed
Report Database Printout (details):	☒ enclosed ☐ not requested ☐ nothing listed

Report Digital Database Records:	☐ enclosed	☒ not requested	☐ nothing listed
Resource Record Copies:	☒ enclosed	☐ not requested	☐ nothing listed
Details of resources NBNR in Report TOI-02618			
Report Copies:	☒ enclosed	☐ not requested	☐ nothing listed
OHP Historic Properties Directory:	☐ enclosed	☐ not requested	☒ nothing listed
Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☒ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☐ not requested	☒ nothing listed
Ethnographic Information:	☒ enclosed	☐ not requested	☐ nothing listed
Historical Literature:	☒ enclosed	☐ not requested	☐ nothing listed
Historical Maps:	☒ enclosed	☐ not requested	☐ nothing listed
Local Inventories:	☐ enclosed	☐ not requested	☐ nothing listed
Not available for Tuolumne County			
GLO and/or Rancho Plat Maps:	☒ enclosed	☐ not requested	☐ nothing listed
Shipwreck Inventory:	☒ not available at CCIC; please go to		
http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp			
Soil Survey Maps:	☒ not available at CCIC; please go to		
http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx			

The following details the results of the records search:

Prehistoric or historic resources within the project area:

(1) Ten historical resources have been identified but not formally documented (see Report TO-02618), including the following:

Four mining areas (placer and hard-rock)
One historic road
One historic trail
Four segments of a water conveyance system

(2) For your information the project area falls within the City of Sonora as documented in P-55-005547 (copy of built environment record not attached)

(3) Portions of the following historic maps are presented for your use:

GLO Plat, T2N R14E, Sheet #41-358, dated 1859-1871

Sonora 1:125000 (1891)

Official Map of Tuolumne County, California (1907)
Sonora 7.5' (1948) and (1949)

(4) *Historical Atlas of California* (Beck and Haase 1988) references the Miwok Native American tribe in Tuolumne County.

(5) Historic literature provided includes the following:

"Gold Districts of California" (Clark 1970:121), *California Division of Mines and Geology Bulletin* 193), Sonora Mining District

Tuolumne County, California (*The Union Democrat* 1909; 1996 reprint; 89-110)

FYI: *California Journal of Mines and Geology*, Volume 45, Number 1 (January 1949), "Mines and Mineral Resources of Tuolumne County," does not list any mines within the project area (or radius).

Prehistoric or historic resources within a one-eighth mile radius of the project area: There is one recorded historical resource that includes both built environment (residence) and archaeological resources (mine and prospect pits, ditch, dirt road)—P-55-006909 (copy attached).

Resources known to have value to local cultural groups: None have been formally reported to the CCIC. However, if your project involves the evaluation of buildings, structures or objects, the following agencies would like to be consulted:

Tuolumne Heritage Committee
24 S. Washington Street
Sonora, CA 95370
209-532-6937 or 1733

Joe Sparagna, Chairman
Tuolumne County Historical Society Landmarks Committee
21398 Montgomery Road
Sonora, CA 95370

Previous investigations within the project area: One investigation on the eastern part of the project area: Report # TO-02618 (copy attached).

Previous investigations within a one-eighth mile radius of the project area: Two reports on file:

(1) One investigation: TO-05380, see Report Database Detail

(2) One Historic journal article: TO-05372, see Report Database Detail

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

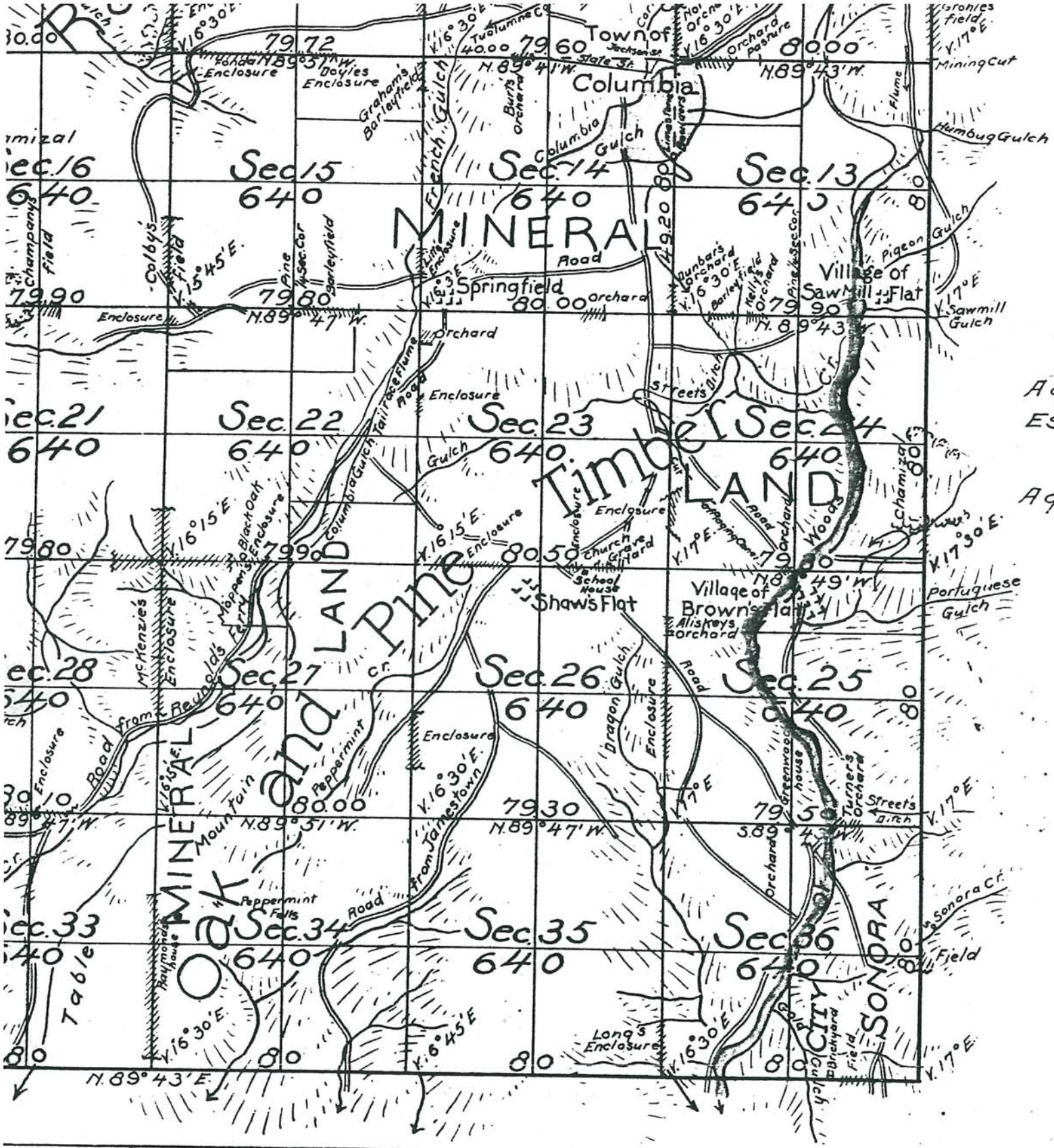
Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Note: Billing will be transmitted separately by our Financial Services office ($385.20), payable within 60 days of receipt of the invoice.

Sincerely,

E. A. Greathouse, Coordinator
Central California Information Center
California Historical Resources Information System



Contract	Amount of Surveys	When surveyed
-30th 1858		1859
		1867
27th 1869	22 mls. 69 chs 24 lks	1869
"	55 " 36 " 18 "	April 16th 1870

T2N
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Sheet 41-358

The above Map of To
is strictly conformat
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Surveyor Generals Offi
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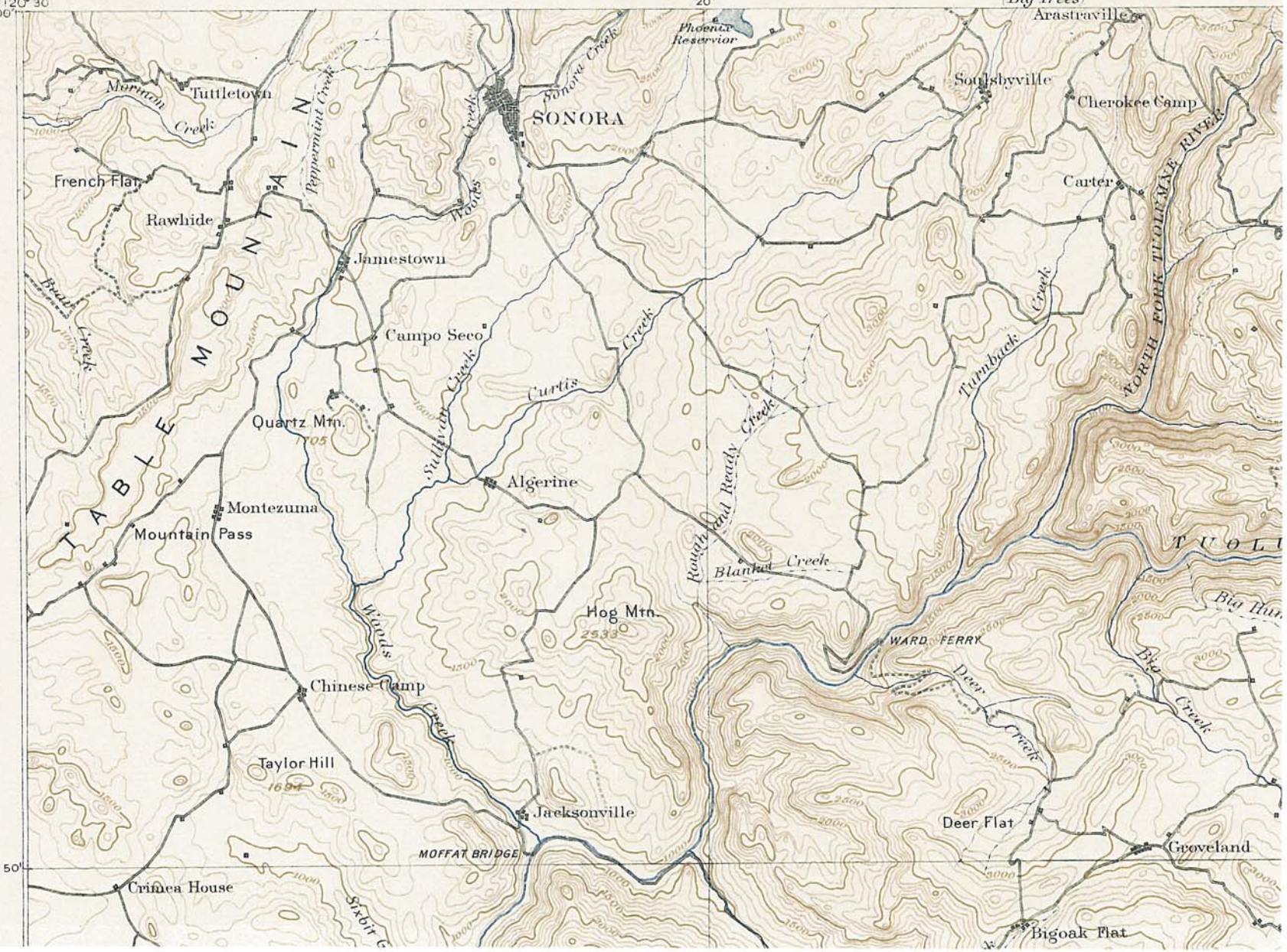
Sonora 1:125000 1891

U.S. GEOLOGICAL SURVEY.
CHARLES D. WALCOTT, DIRECTOR.

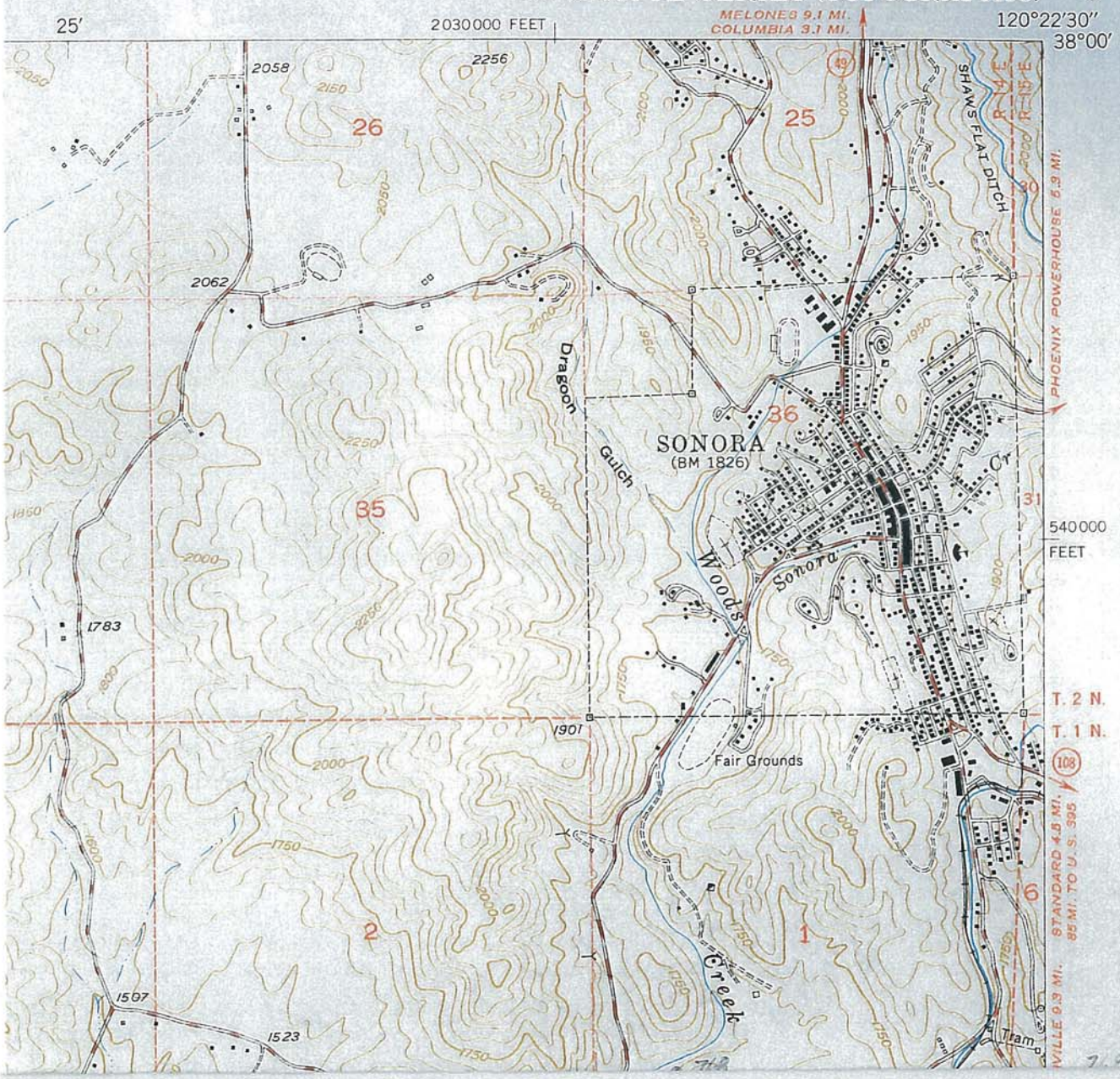
TOPOGRAPHIC SHEET



1949

SONORA QUADRANGLE
CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

(BIG TREES 1:125,000)

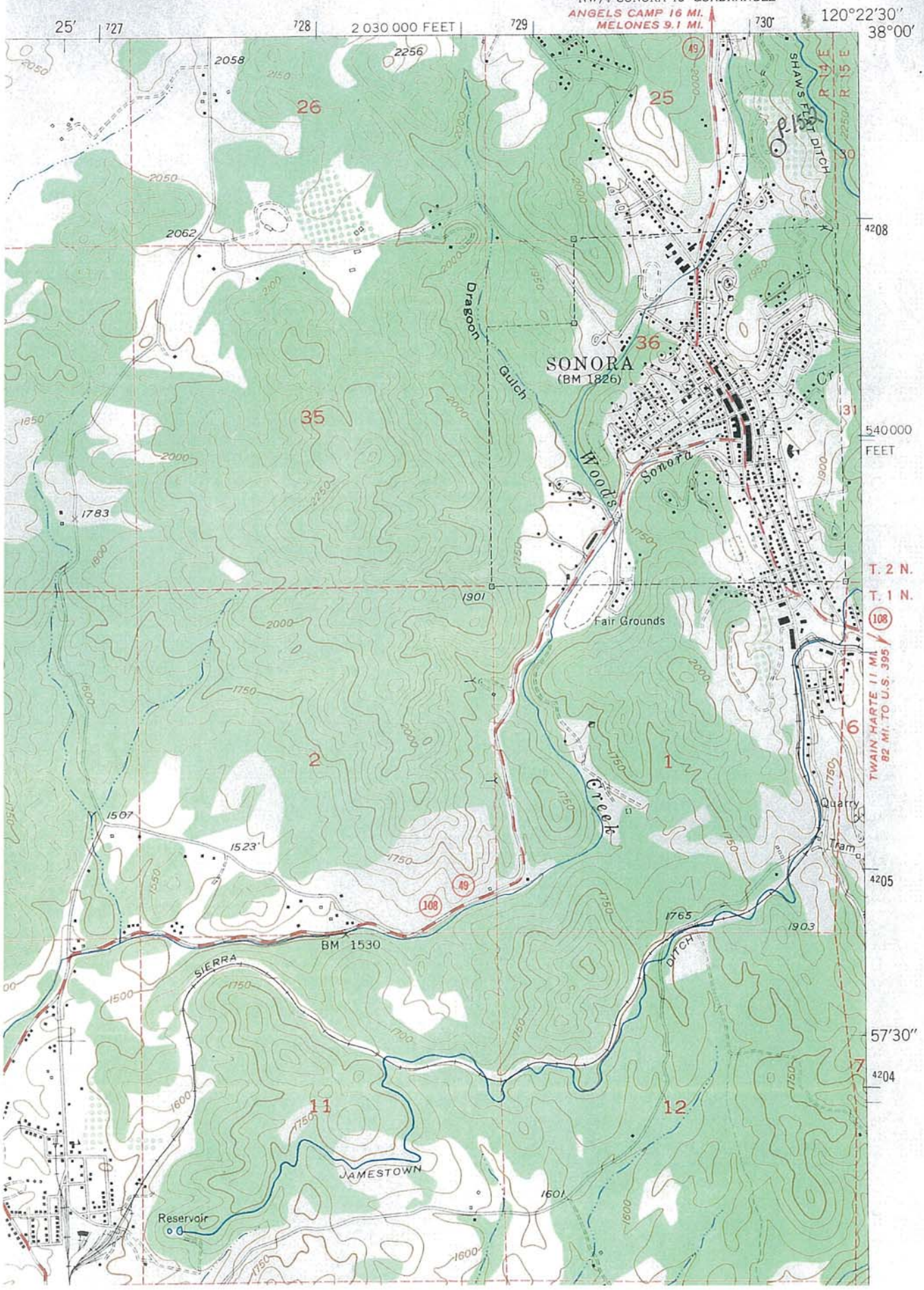


1948

SONORA QUADRANGLE
CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

NW/4 SONORA 15' QUADRANGLE

1960 III SE (COLUMBIA SE)



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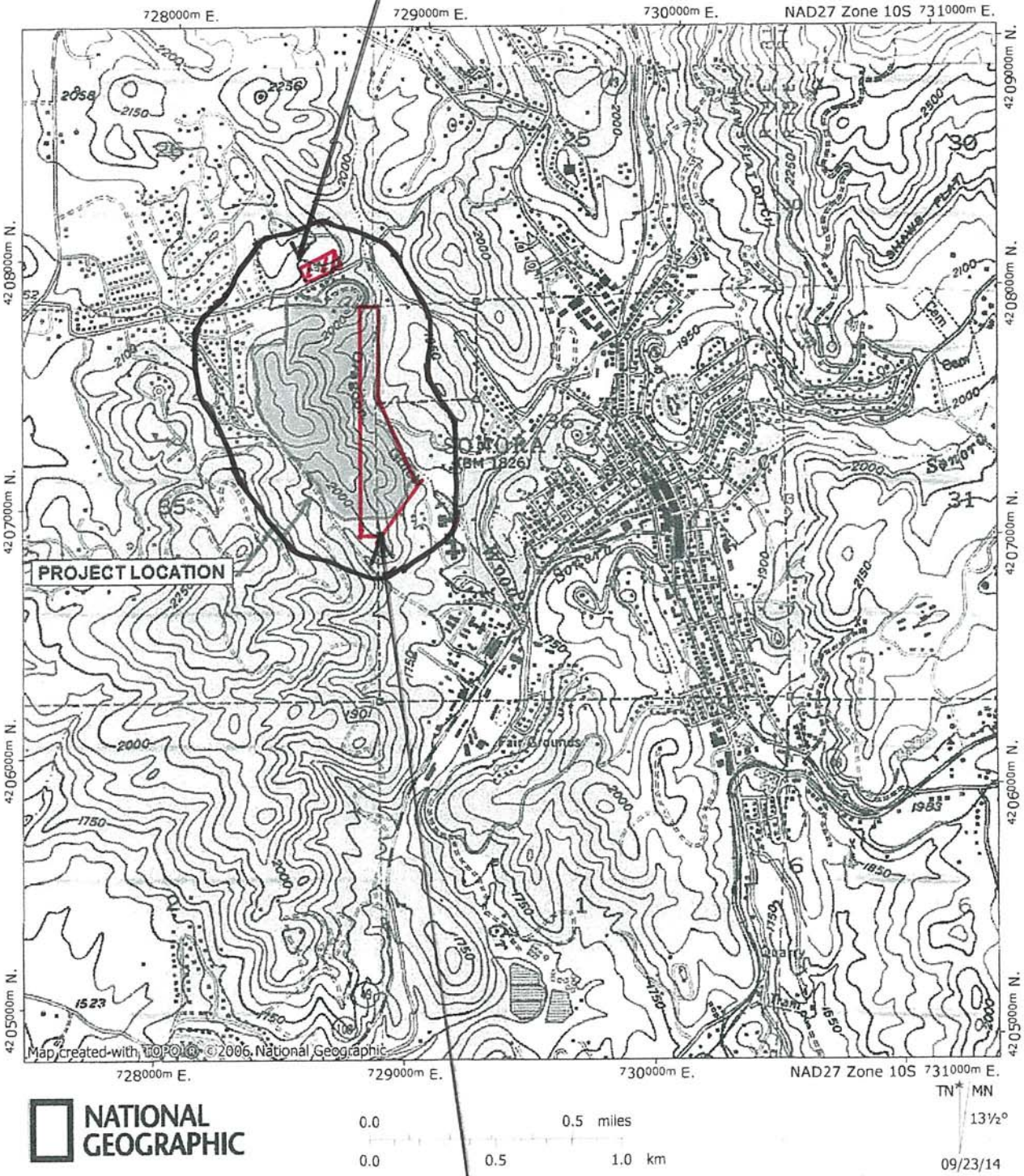


NATIONAL GEOGRAPHIC

0.0 0.5 miles

0.0 0.5 1.0 km

TN* MN

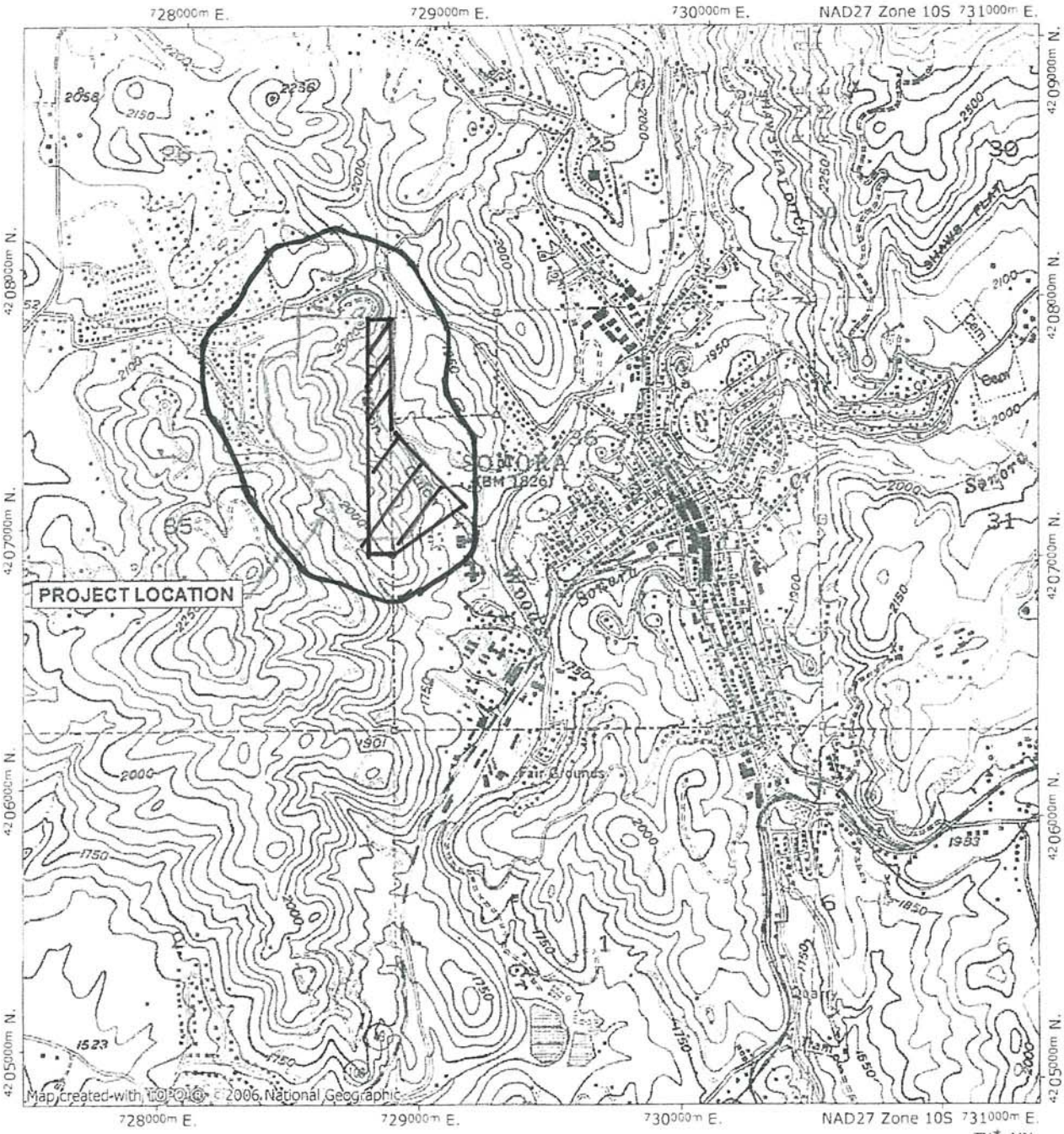
13½°

09/23/14

CCIC 9104/0

Resources

* see map in TO-02618 for 10 resources noted but not recorded



NATIONAL GEOGRAPHIC

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TN* MN

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09/23/14

CCIC 9104/0

Investigations on Project TO-02618

Report Detail: TO-05380

Reports in Radius

Identifiers

Report No.: TO-05380

Other IDs:	*Type*	*Name*
	NADB-R	1365262

Cross-refs:

Citation information

Author(s): Marvin, J.

Year: 2004

Title: Cultural Resources Survey of the Sugarman Project, 11396 Racetrack Road, Sonora, Tuolumne County, California, APN 033-270-26.

Affliliation: Foothill Resources, LTD.

No. pages: 28

No. maps:

Attributes: Archaeological, Architectural/Historical, Field study

Inventory size: ca. 1.7 Acres

Disclosure: Not for publication

Collections: No

General notes

Associated resources

Primary No.	*Trinomial*	*Name*
P-55-006909		

No. resources: 1

Has informals: No

Location information

County(ies): Tuolumne

USGS quad(s): Sonora

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	10/2/2013	jay
Last modified:	9/24/2014	anthro

IC actions:	*Date*	*User*	*Action taken*
	10/2/2013	jay	Appended records from CCIC NADB database

Record status:

Report Detail: TO-05372

Reports in Radius

Identifiers

Report No.: TO-05372

Other IDs:

Type	*Name*
NADB-R	1365252

Cross-refs:

Citation information

Author(s): DeFerrari, C. M.

Year: 1972

Title: Historic Sonora: A Glimpse of the Queen of the Southern Mines - 1852-1900, Sonora's Early Streets. CHIPSA, The Quarterly of the Tuolumne County Historical Society Vol. 11, No. 4, pages 381-396

Affliliation: Tuolumne County Historical Society

No. pages: 16

No. maps:

Attributes: Architectural/Historical, Other research

Inventory size:

Disclosure: Unrestricted

Collections: No

General notes

Associated resources

No. resources:

Has informals: No

Location information

County(ies): Tuolumne

USGS quad(s): Sonora

Address:

PLSS:

Database record metadata

	Date	*User*
Entered:	10/2/2013	jay
Last modified:	9/24/2014	anthro

IC actions:

Date	*User*	*Action taken*
10/2/2013	jay	Appended records from CCIC NADB database

Record status:

~~CCIC~~ 2618
TD N1362030

Tuolumne County
Sonora 7.5'
10 Historic Sites
Noted But Not
Recorded

PRELIMINARY CULTURAL RESOURCE INVESTIGATIONS FOR THE GLOVER ESTATES PLANNED DEVELOPMENT SONORA, CALIFORNIA

Prepared for:

Schack & Company, Inc.
P. O. Box 339
Tracy, California 95378

Prepared by:

Judith Marvin
Foothill Resources, Ltd.
Murphys, California 95247

With contributions by:

Shelly Davis-King
Davis-King and Associates
Standard, California

and

Carlo De Ferrari
Sonora, California 95370

March 1995

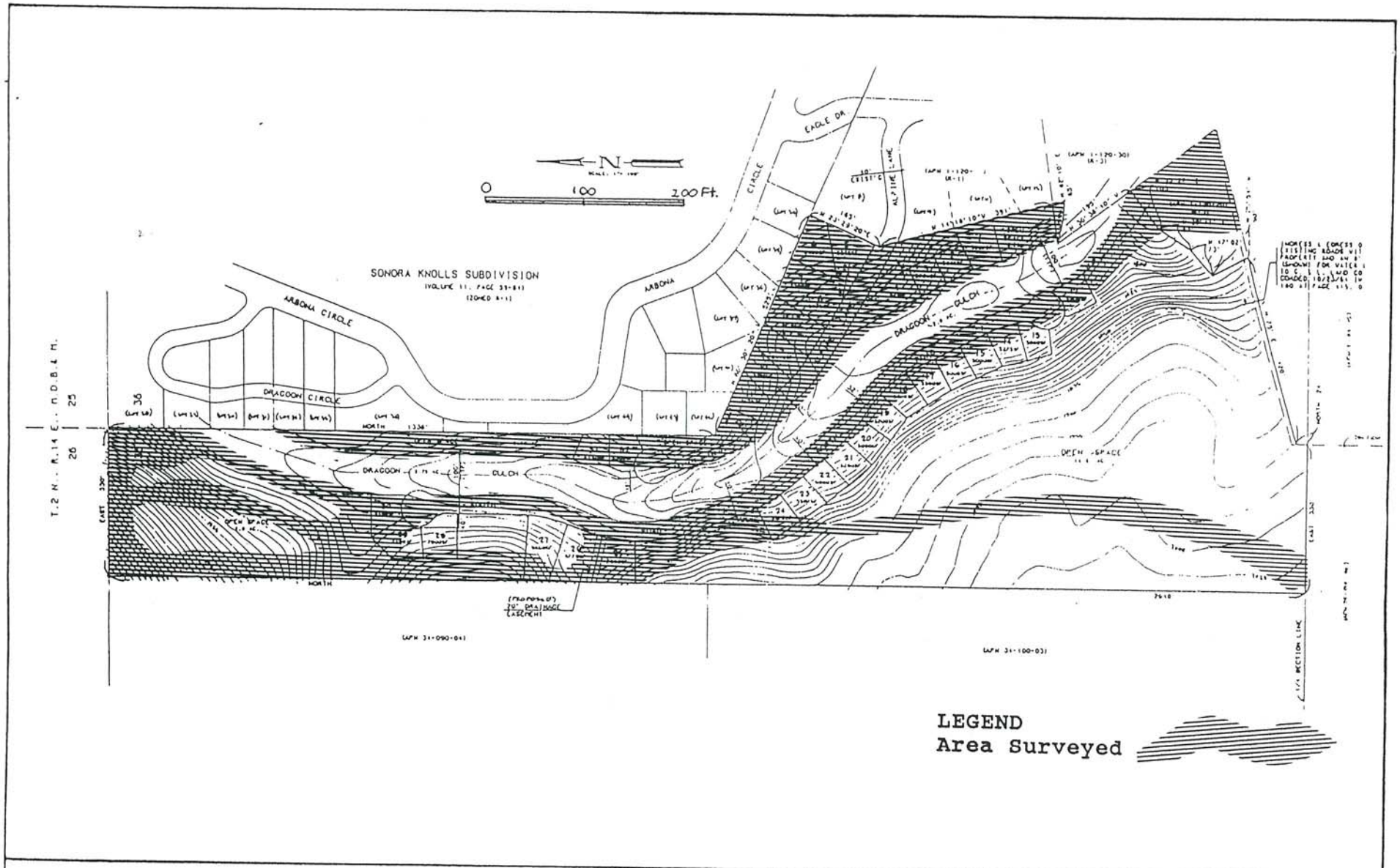


Figure 2. AREA SURVEYED

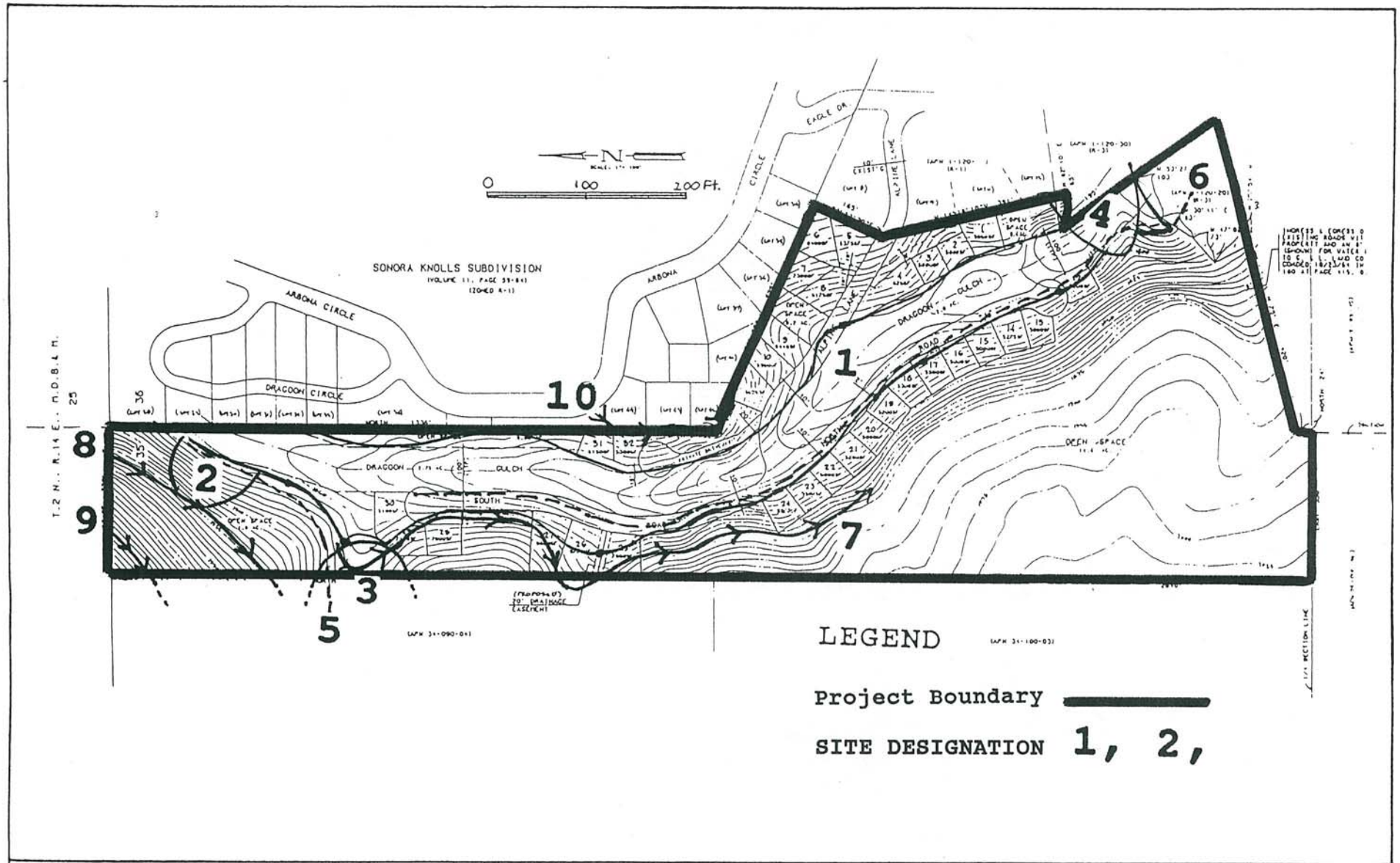


Figure 3. ARCHAEOLOGICAL SITE MAP

State of California–The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # P-55-006909
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code Reviewer Date

 *Resource Name or #: (Assigned by recorder) Gibbs Residence

3/2004

P1. Other Identifier: Clinton Residence, Sugarman Residence

*P2. Location: ☐ Not for Publication ☑ Unrestricted *a. County Tuolumne

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Sonora Date 1948, PR 1987 T 2N R 14E, SE ¼ of SE ¼ of Sec. 26; MDBM

c. Address 11396 Racetrack Road City Sonora Zip 95370

d. UTM: (Give more than one for large and/or linear resources) Zone 10 mE/ mN

e. Other Locational Data: e.g., parcel #, directions to resource, elevation, etc., as appropriate) APN 033-270-26

*P3a. Description: Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries). The cultural resources identified on this 1.7-acre parcel of land include a Craftsman residence, garage, well house, and associated rock walls and terraces, all dating to ca. 1920. The residential features are located on a steep south-facing slope, with rock retaining walls, terraces, and oak trees. Other resources on the property include a rock-lined drainage ditch, hard-rock mine and prospects, and an earthen road, none of which can be associated with any particular endeavor or temporal period, but which appear to predate the residential features. Ornamental plantings observed included a walnut tree, horehound, St. Johns Wort, and bulbs. The identified features are described below.

Feature 1: Gibbs Residence. This architectural resource consists of a Craftsman residence, constructed ca. 1920 for Leland and Lillian Gibbs. It was originally a one-story frame house with a cross-gable roof with exposed rafters. Hexagonal louvres and decorative knee braces are featured in the gable ends. The south façade features a projecting front-gable entry porch, supported by three battered quartz columns. The walls were originally clad in horizontal tongue and groove one-quarter rounds, simulating log siding. The house has a board-formed concrete foundation and a concrete stoop. Modern alterations include a two-story frame addition to the west elevation, 10-light entry door, vinyl windows, shingle siding, and rock facing over the concrete foundation. (Continued on page 2.)

*P3b. Resource Attributes: (List attributes and codes) HP2, residence; AH6, water ditch; AH7, earthen road; AH9, mine and prospect pits

*P4. Resources Present: ☑ Building ☑ Structure ☐ Object ☑ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) View northwest, 15 December 2003.

*P6. Date Constructed/Age and Sources: ☑ Historic ☐Prehistoric ☐ Both
1890s-1920s, Assessor's records

*P7. Owner and Address:
Philip and Susan Sugarman
20545 Eureka Road
Sonora, CA 95370

*P8. Recorded by: (Name, affiliation, address)
Judith Marvin
Foothill Resources, Ltd.
P.O. Box 2040
Murphys, CA 95247

*P9. Date Recorded: 12/15/2003

*P10. Survey Type (Describe): Intensive survey

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Cultural Resources Survey of Sugarman Project, 11396 Racetrack Road, Sonora, Tuolumne County, California, APN 033-270-26, Judith Marvin, January 2004.

*Attachments: NONE ☑ Location Map ☐ Sketch Map ☑ Continuation Sheet ☑ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List)

P3a. Description (continued):

Feature 2: Garage. This garage is a simple rectangular frame building with a low-pitched front-gable roof covered in aluminum panels. The front and rear (west and east) walls are clad in aluminum siding, while the north and south walls are clad in horizontal board V-rustic siding. The building has plywood garage doors on the west façade.

Feature 3: Well House. The well house is a modern frame structure with a gable roof. The floor is lined with concrete and the building contains the pump and plumbing for the well. The only original portion of the structure appears to be a rock wall (approx. 2 ft high), mortared with Portland cement, on the north and east elevations.

Feature 4: Rock Retaining Walls and Fishpond. A series of 15+ rock retaining walls and terraces are located downslope and east of the residence. They vary from 6 courses to 20 courses in height, and in length from 10 feet to 30 feet. They support the driveway, the garage driveway, a series of ornamental terraces, and a rock-lined fishpond. They are constructed of local schist, and some are partially collapsed.

Feature 5: Improved Drainage. This improved drainage carried water from an unnamed seasonal drainage, earthen-dammed stock pond (?), and placering area southeasterly through the property and then through a culvert beneath Racetrack Road to connect with Dragoon Gulch to the east. Only a small segment, approximately 30 feet, is rock-lined with about 6 to 8 courses of local rock. Much of the drainage was choked with brush and was not surveyed.

Feature 6: Hard-rock Mine. This feature consists of an adit and prospect of a hard-rock mine, located immediately behind the residence. Another prospect pit is located east of the adit, and may be associated. All are sloughed in and their original dimensions unknown. The prospect pit is about 5 ft deep, and approximately 10 ft x 10 ft.

Feature 7: Road Segment. This feature consists of a segment of a historic earthen road. It runs northeasterly from the garage (Feature 2) around the hillside, is cut by a modern driveway, and disappears along the hillside to the east of the project area. The road is approximately 9 ft wide, 200 ft long, and supported on the downhill side by one to two courses of rock. Its origin and destination are unknown, but may have been associated with early mining activity in the Dragoon Gulch area, or possibly from Dragoon Gulch to the mine (Feature 6) before the residence was constructed.

State of California–The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, AND OBJECT RECORD

Primary # P-55-006909
HRI #

***NRHP Status Code** 6Z
***Resource Name or #** (Assigned by recorder) Gibbs Residence

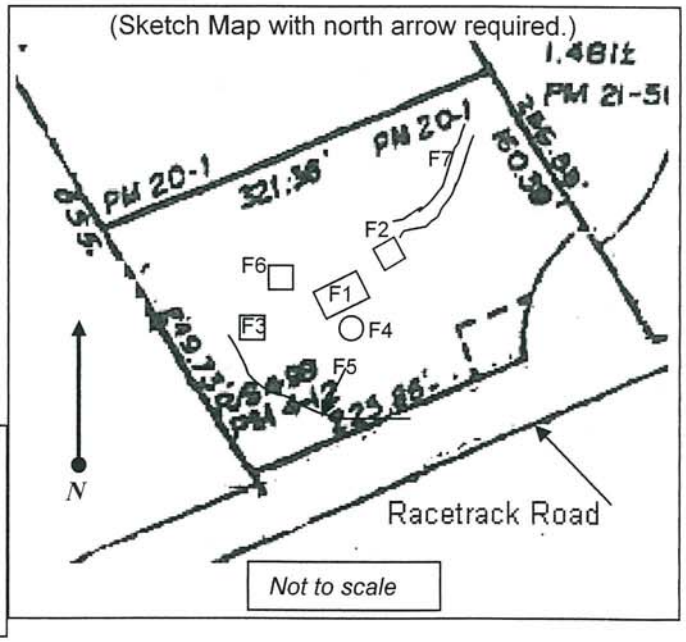
B1. Historic Name: Leland and Lillian Gibbs Residence
B2. Common Name: Clinton Residence, Sugarman Residence
B3. Original Use: Residence B4. Present Use: Residence
***B5. Architectural Style:** Craftsman Bungalow
***B6. Construction History:** (Construction date, alterations, and date of alterations)
The residence was constructed ca. 1920 for Leland and Lillian Gibbs. Alterations in 2003 consisted of a two-story addition to the west elevation, shingle wall cladding, modern 10-light door, vinyl windows, and rock facing on the foundation.
***B7. Moved?** ☑ No ☐ Yes ☐ Unknown **Date: Original Location:**
***B8. Related Features:** Garage, well house, stone walls and terracing.
B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme** Residential architecture **Area** Sonora
Period of Significance 1910s-1920s **Property Type** Residence **Applicable Criteria** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.) The residence was constructed ca. 1920 for Leland and Lillian Gibbs on land that is a small portion of a 160-acre parcel patented by James M. Root on 1 July 1874, and acquired by 1906 by Michael and Lucy L. Shine (Skidmore n.d., Thom 1906). In June of 1913 they sold the land to Leland S. Gibbs of Berkeley. The deed noted that Gibbs had the right to construct and maintain a ditch "from the reservoir of the Water Company from the above land across other lands of Shine" (Deed Book 76:435, recorded June 7, 1913). In 1925 Lucy L. Shine sold an additional 7.54 acres to Leland S. Gibbs, noting that it commenced at the northeast corner of his orchard (the lands conveyed in 1913). Two years later Lucy L. Shine (a widow) corrected the above deeds to Gibbs with a new deed to the property, which then totaled 41.78 acres (Deed Book 89:414, recorded August 1, 1927).

Michael Shine's assessment in 1913 noted improvements valued at $50, while Gibbs was assessed for a house, barn, and fence valued at $150 in 1920. By 1925 the value of the improvements on the property, a house, fence, and garage on 34¼ acres, was assessed to Gibbs at a value of $400, suggesting the construction of the existing house and garage. In 1930 the improvements (noted as house, barn, and fence) were still valued at $400, but the acreage was noted as 41.79. In 1935 Lillian H. Gibbs was assessed for 41.78 acres (20 acres in the south half of Section 26 and 21.78 in the north half of Section 35), with a house, barn, and fence valued at $400 and personal property of $375 (Tuolumne County Assessment Roll Books, various). Other features in the project area, including an improved drainage, adit and prospects, and an earthen road, were evidently developed prior to the construction of the Gibbs residence ca. 1920.

The residence does not appear eligible for listing on the California Register under any of the applicable criteria. Under Criterion 1, although it is associated with the 1910s-20s development of Sonora, it is not an important contributor to that event, nor is it associated with any persons important in history (Criterion 2). Under Criterion 3, it is a simple vernacular Craftsman residence, and is not the work of a master, nor does it contain high artistic values. It is also completely lacking in integrity, having undergone extensive additions and alterations in 2003.

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References:** Susan Sugarman, personal communication of 15 December 2003; Tuolumne County Assessment Rolls, Deed Books, Homestead Books, and Official Maps.
B13. Remarks:
***B14. Evaluator:** Judith Marvin, Foothill Resources, Ltd. P.O. Box 2040, Murphys, CA 95247
***Date of Evaluation:** 13 January 2004

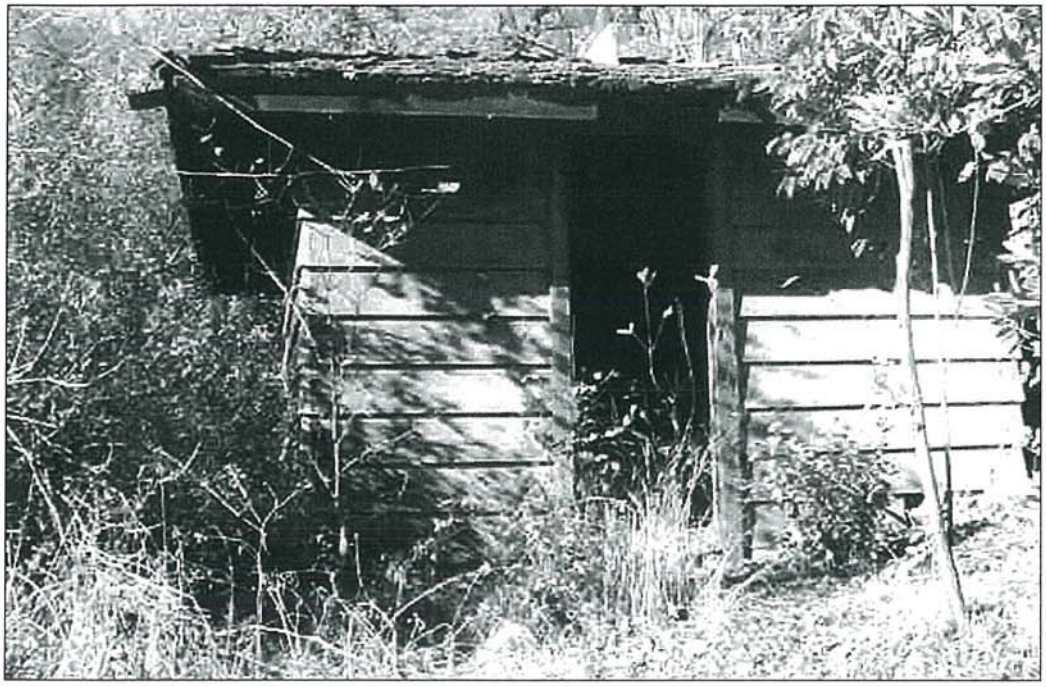
(Sketch Map with north arrow required.)



(This space reserved for official comments)

Feature 1, Residence, view west.

Feature 2, Garage, view east.



Feature 3, Well House, view north.

Feature 4a, Rock retaining wall below house, view northwest.

Feature 4b, rock retaining wall on road, view north.

Feature 4c, Fishpond.

Feature 6, Prospect pit.

Feature 7, Road Segment, view northeast.

State of California–The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # P-55-006909
HRI #
Trinomial

Page 8 of 8 *Resource Name or # (Assigned by recorder) Gibbs Residence

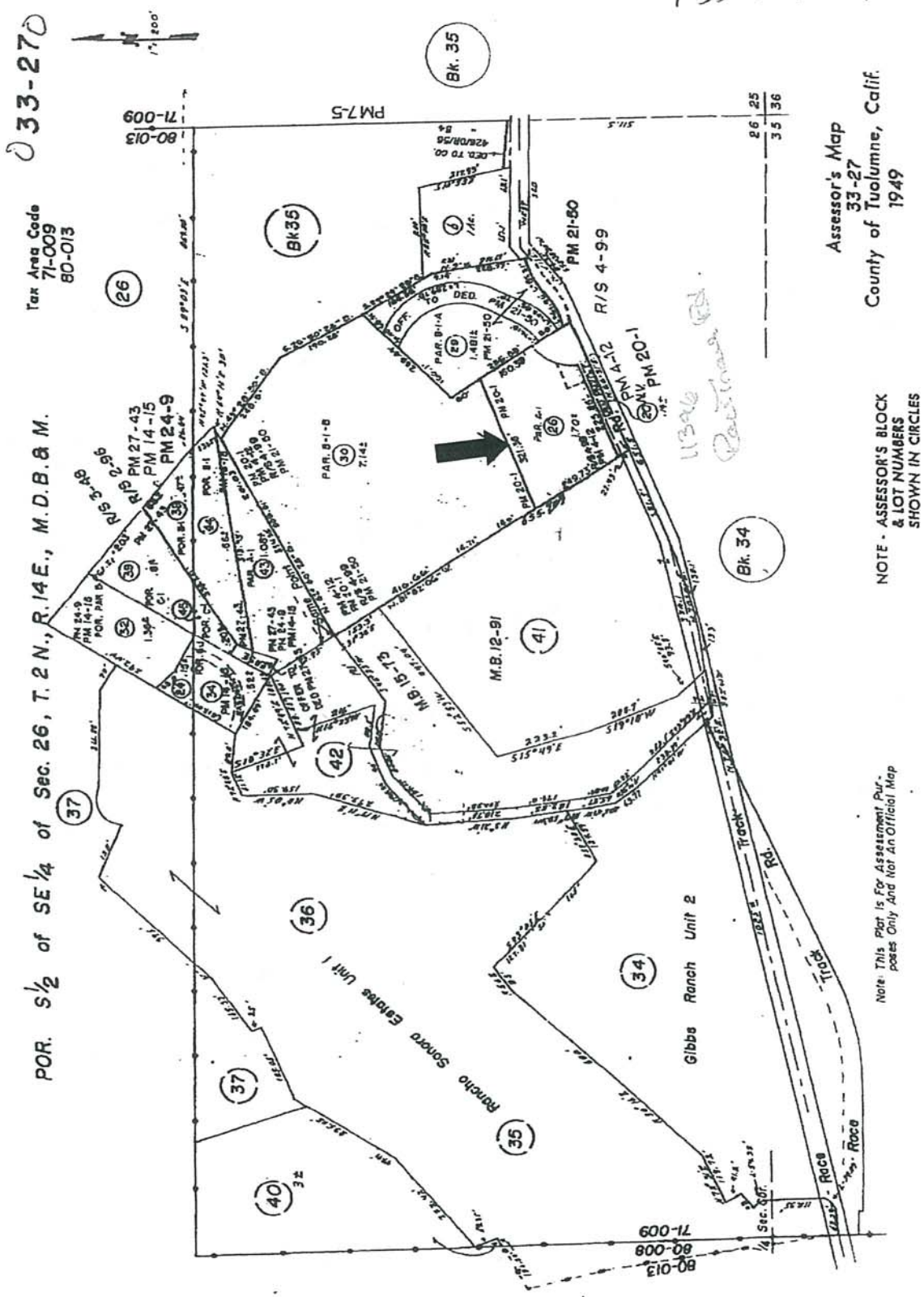
*Map Name: Sonora, Calif. Scale: 1:24000 Date of Map: 1948 PR 1987

Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

DPR 523J (1/95)

*Required information

P-55-006909



Sugarman Project Survey and Location Map
11396 Race Track Road
Sonora, CA 95370
APN 033-270-26

APPENDIX C: NATIVE AMERICAN COORDINATION

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd.
West Sacramento, CA 95691
(916) 373-3710
Fax (916) 373-5471

October 6, 2014

Ric Windmiller
Windmiller Consulting
2280 Grass Valley Highway 205
Auburn, CA 95603

By: FAX: 530-878-0915

2 Pages

Re: Dragon Gulch Trail project, Tuolumne County

Mr. Windmiller,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3713.

Sincerely,

Frayte Wenston for

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts
Tuolumne County
October 6, 2014

Buena Vista Rancheria
Rhonda Morningstar Pope, Chairperson
1418 20th Street, Suite 200 Me-Wuk / Miwok
Sacramento , CA 95811
rhonda@buenavistatribe.com
(916) 491-0011 Office
(916) 491-0012 Fax

Chicken Ranch Rancheria of Me-Wuk
Lloyd Mathiesen, Chairperson
P.O. Box 1159 Miwok - Me-wuk
Jamestown , CA 95327
chixrnch@mlode.com
(209) 984-4806 Office
(209) 984-5606 Fax

Chicken Ranch Rancheria of Me-Wuk Indians
Melissa Powell, Cultural Resources
P.O. Box 1159 Miwok/Me-wuk
Jamestown , CA 95327
(209) 984-4806 Office
(209) 984-5606 Fax

Chicken Ranch Rancheria of Me-Wuk Indians
Sally Smith, Tribal Administrator
P.O. Box 1159 Miwok/Me-wuk
Jamestown , CA 95327
(209) 984-4806 Office

Tuolumne Band of Me-Wuk
Kevin Day, Chairperson
P.O. Box 699 Me-Wuk - Miwok
Tuolumne , CA 95379
receptionist@mlode.com
(209) 928-3475 Office
(209) 928-1677 Fax

Tuolumne Band of Me-Wuk
Stanley Cox, Cultural Resources Dr
P.O. Box 699 Me-Wuk - Miwok
Tuolumne , CA 95379
receptionist@mlode.com
(209) 928-3475 Office
(209) 928-1677 Fax

Tuolumne Band of Me-Wuk
Reba Fuller
P.O. Box 699 Me-Wuk - Miwok
Tuolumne , CA 95379
rfuller@mlode.com
(209) 928-3475 Office
(209) 928-1677 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Dragon Gulch Trail project, Tuolumne County.

Ric Windmiller

CONSULTING ARCHAEOLOGIST

2280 GRASS VALLEY HIGHWAY #205
AUBURN, CALIFORNIA 95603

530/878-0979
FAX 530/878-0915

SAMPLE LETTER

October 7, 2014

Ms. Rhonda Morningstar-Pope
Chairperson
Buena Vista Rancheria
1418 20th Street, Suite 200
Sacramento, CA 95811

Re: City of Sonora Dragoon Gulch Master Trails Plan

Dear Ms. Morningstar-Pope:

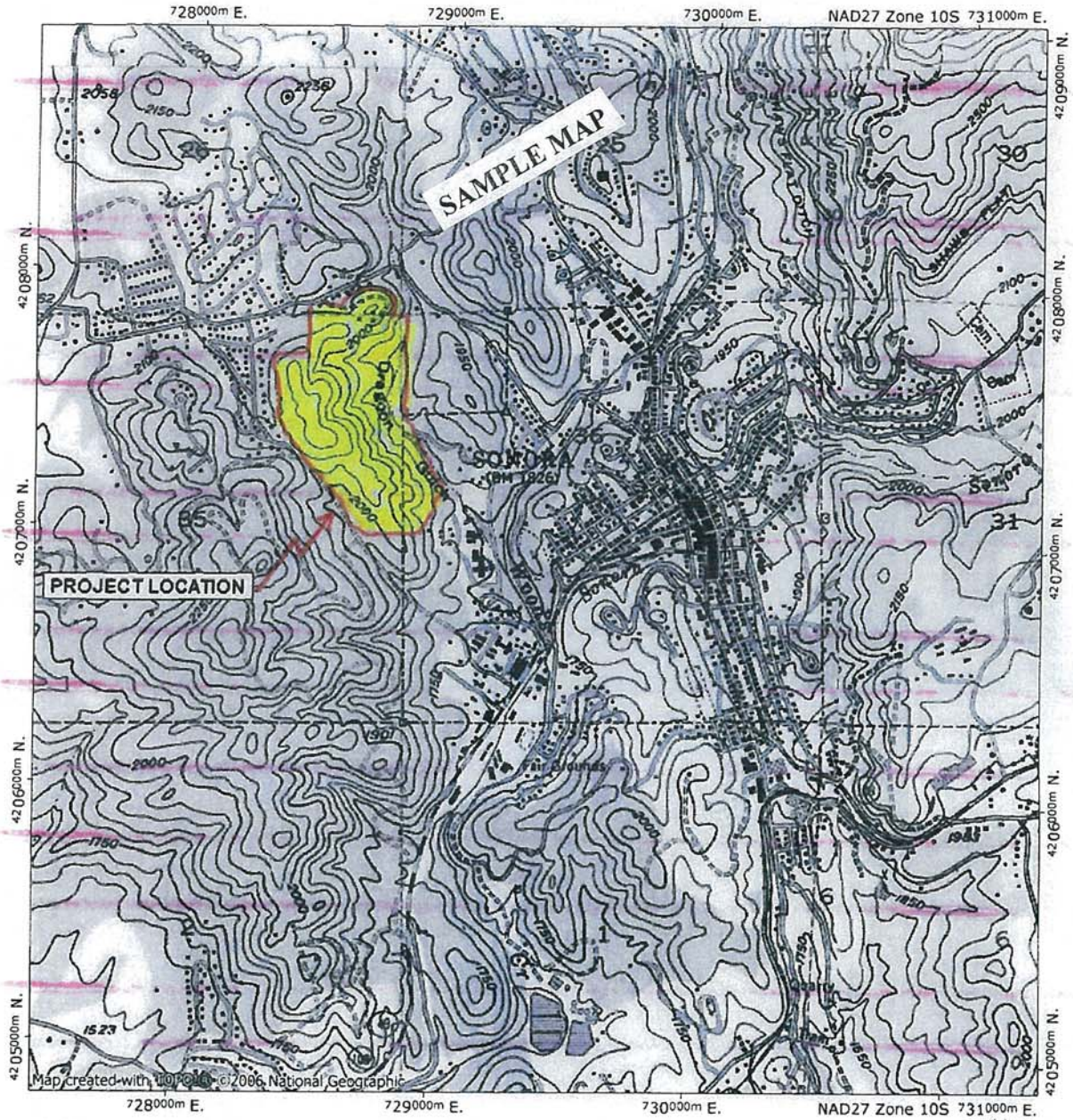
The City of Sonora's Dragoon Gulch Master Trails Plan proposes the build-out of the Dragoon Gulch Recreation Area within the City. Approximately 35 acres has already been developed with a network of trails. The Trails Master Plan calls for an approximately 7.5 mile extension of existing trails throughout an additional 67 acres recently purchased by the City. The Master Plan also calls for construction of a new 20-stall parking lot, access road and picnic area at a new trailhead accessed from Racetrack Road (see attached map).

The Native American Heritage Commission provided your name as one who may have knowledge of Native American cultural resources in the project area. If you have any information regarding known or suspected sacred, ceremonial or other sites of Native American importance that may be impacted by the proposed project, please feel free to contact Cathryn Chatterton at the above address. You may also respond by telephone (530-878-0979), fax (530-878-0915) or email: windmiller-consult@sbcglobal.net. We would appreciate a response at your earliest convenience, if you wish to comment at this time.

Yours sincerely,

Ric Windmiller
Registered Professional Archaeologist

Enclosure



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TN MN

13½°

09/23/14

CONTACT LOG

Native American Heritage Commission
1550 Harbor Boulevard
West Sacramento, CA 95891

October 6, 2014
Commission responded to the consultant's request with the results of the file search (negative) and list of contacts.

Ms. Rhonda Morningstar Pope
Chairperson
Buena Vista Rancheria

October 7, 2014
The consultant wrote letter requesting information on known or suspected sites of Native American significance that may be impacted by the proposed project. The consultant included a project location map. No response was received.

December 8, 2014
The consultant attempted to reach the contact by telephone. With no response, the consultant left a detailed voice mail message. No response has been received to date.

Mr. Lloyd Mathiesen
Chairperson
Chicken Ranch Rancheria of Me Wuk

October 7, 2014
The consultant wrote letter requesting information on known or suspected sites of Native American significance that may be impacted by the proposed project. The consultant included a project location map. No response was received.

December 8, 2014
The consultant attempted to reach the contact by telephone. However, the telephone had been disconnected.

Ms. Melissa Powell
Cultural Resources
Chicken Ranch Rancheria of Me-Wuk Indians

October 7, 2014
The consultant wrote letter requesting information on known or suspected sites of Native American significance that may be impacted by the proposed project. The consultant included a project location map. No response was received.

December 8, 2014
The consultant attempted to reach the contact by telephone. However, the telephone had been disconnected.

Ms. Sally Smith
Tribal Administrator
Chicken Ranch Rancheria of Me-Wuk Indians

October 7, 2014
The consultant wrote letter requesting information on known or suspected sites of Native American significance that may be impacted by the proposed project. The consultant included a project location map. No response was received.

December 8, 2014
The consultant attempted to reach the contact by telephone. However, the telephone had been disconnected.

Mr. Kevin Day
Chairperson
Tuolumne Band of Me-Wuk

October 7, 2014
The consultant wrote letter requesting information on known or suspected sites of Native American significance that may be impacted by the proposed project. The consultant included a project location map. No response was received.

December 8, 2014
The consultant attempted to reach the contact by telephone. With no response, the consultant left a detailed voice mail message. No response has been received to date.

Mr. Stanley Cox
Cultural Resource Director
Tuolumne Band of Me-Wuk

October 7, 2014
The consultant wrote letter requesting information on known or suspected sites of Native American significance that may be impacted by the proposed project. The consultant included a project location map. No response was received.

December 8, 2014
The consultant attempted to reach the contact by telephone. With no response, the consultant left a detailed voice mail message responding to the outgoing message indicating that the contact was Robert Cox and not Stanley Cox. No response has been received to date.

Ms. Reba Fuller
Tuolumne Band of Me-Wuk

October 7, 2014
The consultant wrote letter requesting information on known or suspected sites of Native American significance that may be impacted by the proposed project. The consultant included a project location map. No response was received.

December 8, 2014
The consultant attempted to reach the contact by telephone. With no response, the consultant left a detailed voice mail message. No response has been received to date.

Rosalynn Lwenya, Ph.D.
Environmental Director
Buena Vista Rancheria

December 8, 2014
The consultant was referred to Dr. Lwenya in the consultant's attempt to contact Buena Vista Rancheria. In attempting to reach the contact by telephone, there was no response. The consultant left a detailed voice mail message. No response has been received to date.

APPENDIX C: CONFIDENTIAL LOCATION OF CULTURAL RESOURCES

This appendix may contain information on the specific locations of archaeological resources. This information is not for publication or release to the general public. It is for planning, management and research purposes only. Information on the locations of prehistoric and historic sites are exempted from the California Freedom of Information Act, as specified in Government Code §6254.10.

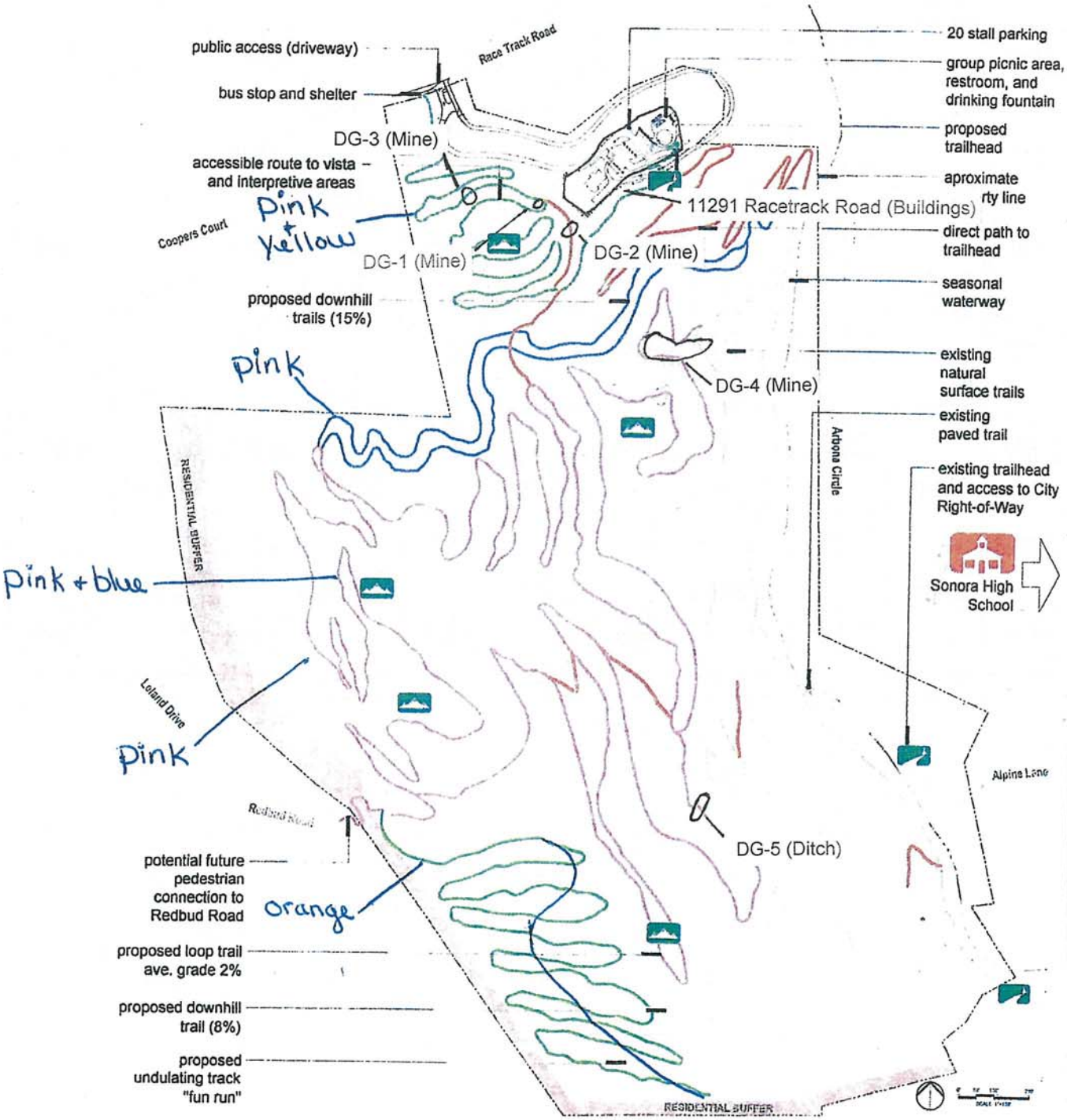


Figure 9. Confidential location of cultural resources in relation to trails

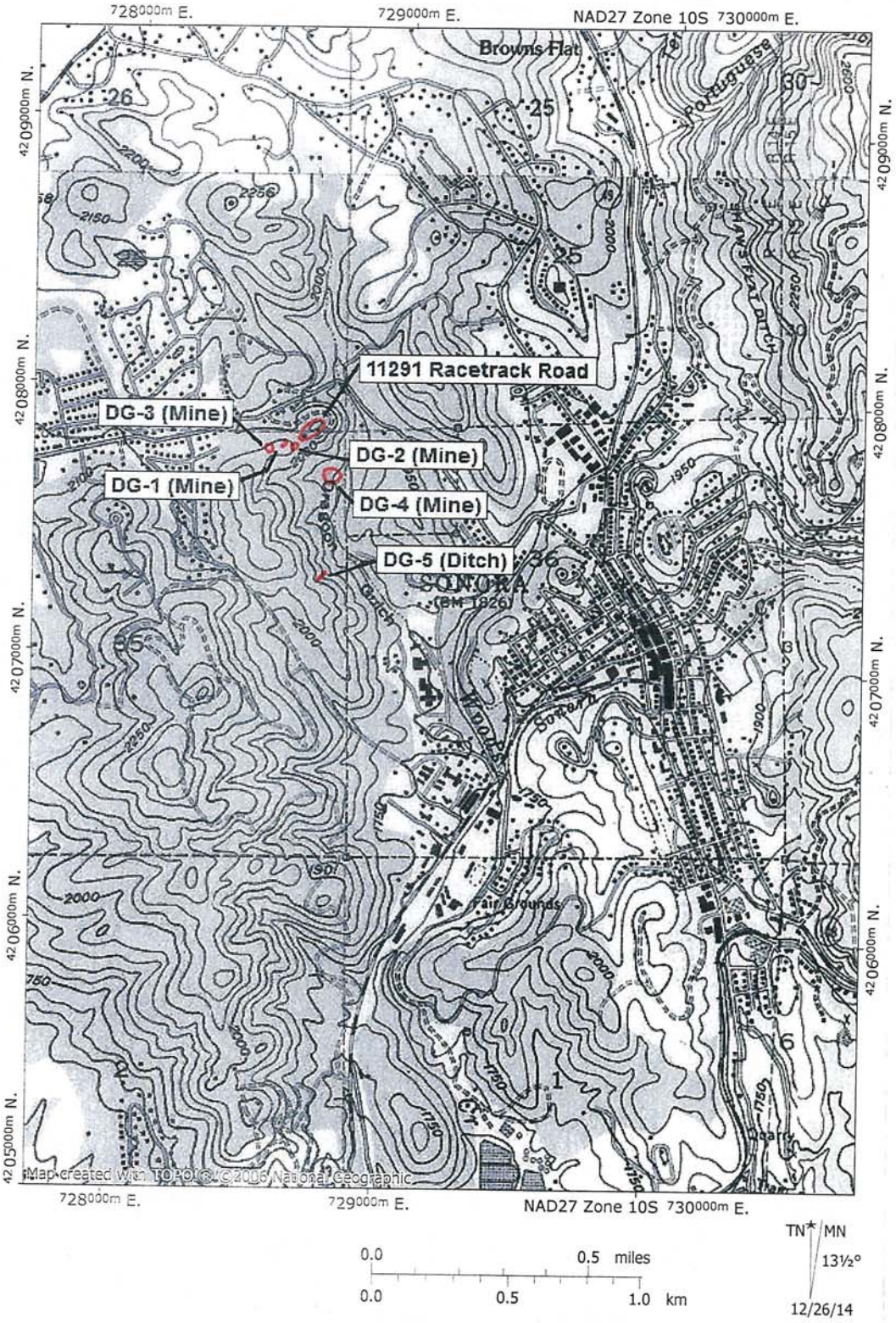


Figure 10 Confidential location of cultural resources in relation to locality

APPENDIX D: CONFIDENTIAL RECORD FORMS

This appendix may contain information on the specific locations of archaeological resources. This information is not for publication or release to the general public. It is for planning, management and research purposes only. Information on the locations of prehistoric and historic sites are exempted from the California Freedom of Information Act, as specified in Government Code §6254.10.

State of California ▯ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Review Code | Reviewer | Date | Listings

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted**

*a. **County** Tuolumne **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. **USGS 7.5' Quad** Sonora, Calif. **Date** 1948 (rev. 1987) **T** 2N; **R** 14E; NE ¼ **of** NE ¼ **of Sec** 35 ; MD **B.M.**

c. Address 11291 Race Track Road City Sonora Zip 95370

d. UTM: (Give more than one for large and/or linear resources) Zone ___, _____ mE/ _____ mN

e. Other Locational Data: From Sonora at Highway 49 and Snell Street, take Snell Street east for approximately 0.8 miles until the street forks. Go left onto Race Track Road, and continue for approximately 0.2 miles. Turn left onto the private driveway for 11291 Race Track Road. The driveway will continue up a hill and terminate at the house.

*P3a. **Description:** This resource consists of a California Ranch style residence and its associated outbuildings (horse barn, shed, and garage). The residence has an L-shaped plan with an inset front porch. Siding includes horizontal shiplap and vertical board and batten. The roof is a salt box style roof covered in composite shingles with wide overhanging eaves. A large brick chimney protrudes from the roof's ridge. The inset porch contains two picture windows, a front door, brick cladding, and a brick patio and path. Other fenestration includes hung windows with screens. (See continuation sheet).

*P3b. **Resource Attributes:** HP2. Single Family Property

*P4. **Resources Present:** ☒ Building ☐Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: Photo #3222; SE elevation of residence; looking NW.

*P6. **Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both

1945 (historic map review; current tenant)

*P7. **Owner and Address:**
City of Sonora
94 N. Washington Street
Sonora, CA 95370

*P8. **Recorded by:** (Name, affiliation, and address) Katie Vallaire
3708 Bigler Way
Sacramento, CA 95817

*P9. **Date Recorded:** 9/29/2014

*P10. **Survey Type:** (Describe)
Intensive

*P11. **Report Citation:** (Cite survey report and other sources, or enter "none.")

*Attachments: ☐NONE ☒Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List): ____

State of California ▯ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) 11291 Race Track Road ***NRHP Status Code** 6Z

B1. Historic Name: N/A

B2. Common Name: N/A

B3. Original Use: residence B4. Present Use: residence

***B5. Architectural Style:** California Ranch style

***B6. Construction History:** The residence was constructed circa 1945. The rear deck was expanded considerably in the 1980s. The shed was constructed circa 1945. Its original shiplap siding was replaced with T-111 plywood at an unknown date. Presumably, the garage was constructed circa 1945. Its original garage door is missing. According to historic aerial photographs, the barn was constructed between 1945 and 1980. Two additions were constructed on the barn at an unknown date.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** N/A **Original Location:** N/A

***B8. Related Features:** Horse barn, shed, and garage.

B9a. Architect: unknown b. Builder: unknown

***B10. Significance: Theme** N/A **Area** Sonora, California

Period of Significance N/A **Property Type** residence **Applicable Criteria** N/A

The city of Sonora was established in 1849 as a result of the Gold Rush. Dragoon Gulch was named after a group of gold miners who were ex-cavalry soldiers of the United States Army. In the 1850s, water conveyance systems were being constructed in the gulch. Placer mining activities in Dragoon Gulch diminished around 1860. In 1880, the area witnessed its fair share of hard rock (lode) mining activities. During this time, lode mining activities substantially changed Dragoon Gulch's cultural landscape. According to the current tenant, an ex-policeman moved to Sonora from the central valley and built this residence and one other local house around 1945. It's unknown whether or not the builder lived in the house for any length of time. Bob Cutler was the owner for most of the house's history. The current tenant believes that the shed originally served as a residence while the house was under construction from 1945 to 1946.

The residence, garage, shed, and horse barn were not constructed during Sonora's initial settlement and are not associated with a major event in local or national history. They also are not associated with an important person in history or are the work of a master architect or designer. Although the residence is constructed in a California Ranch architectural style, it is not the best example of this style in the area. Furthermore, these buildings are unlikely to yield archaeological data important to future researchers. Therefore, this property does not appear eligible for listing on the California Register of Historical Resources under Criteria 1, 2, 3, or 4.

B11. Additional Resource Attributes: (List attributes and codes) HP4. Ancillary Buildings

***B12. References:**

City of Sonora, 2014. "The History of Dragoon Gulch," electronic resource available at http://www.sonoraca.com/visitsonora/Dragoon/History.pdf.

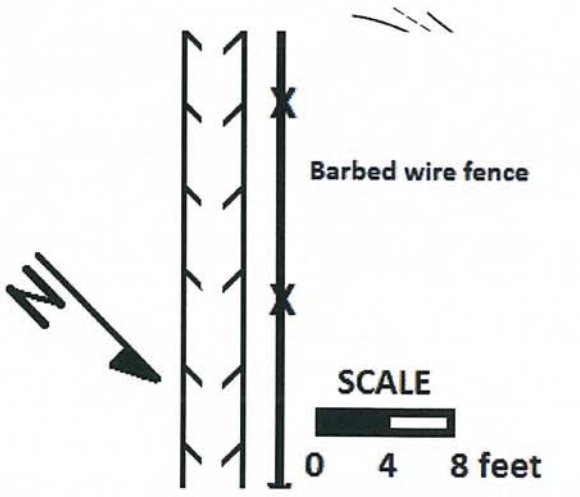
B13. Remarks: None.

***B14. Evaluator:** Katie Vallaire

***Date of Evaluation:** 11/06/2014

(This space reserved for official comments.)

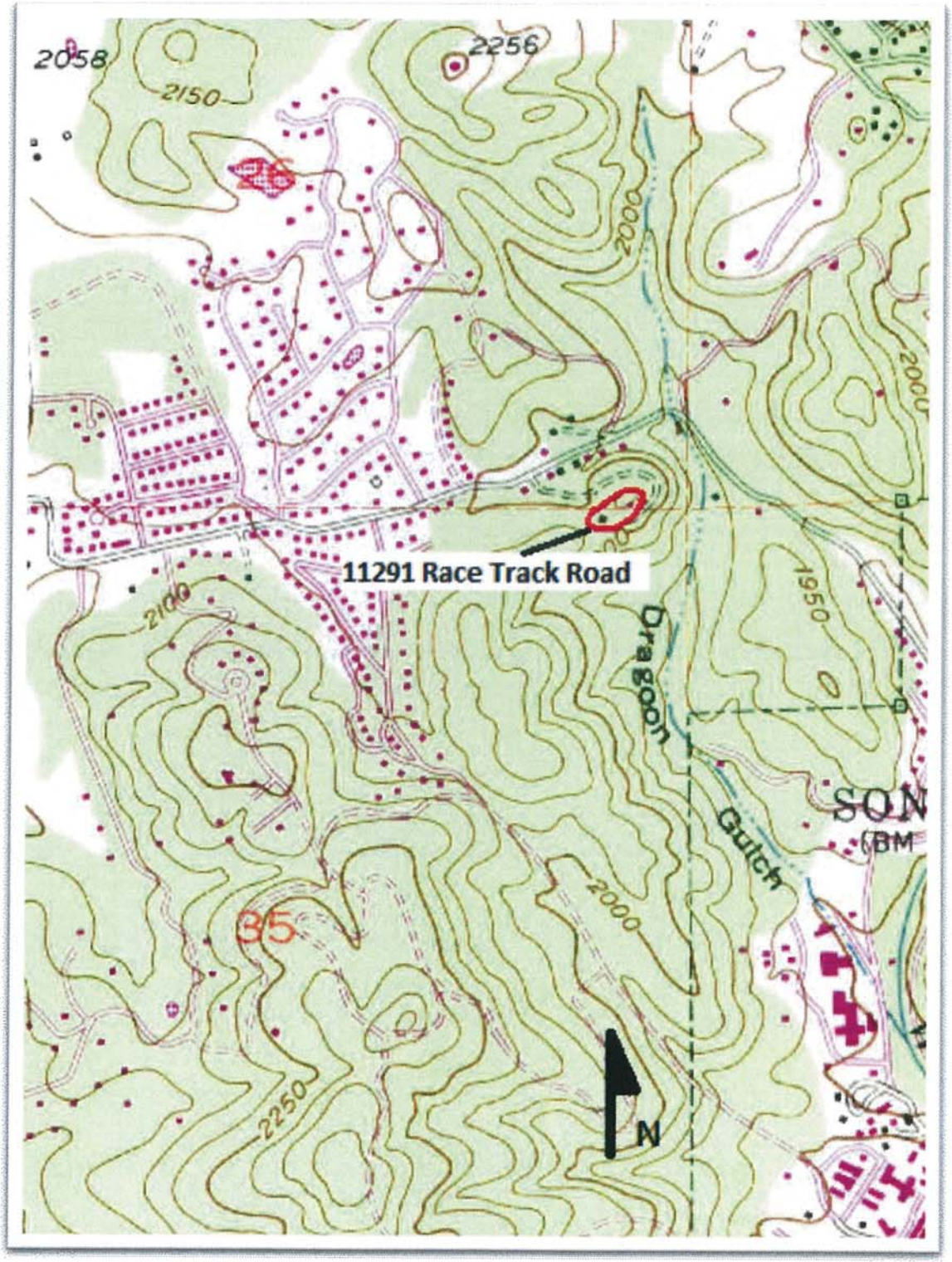
(Sketch Map with north arrow required.)



State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial



* Required information

P3a. Description (continued):

The horse barn contains a rectangular plan, a low-pitched roof covered in metal sheeting, and board and batten siding. The roof has overhanging eaves that are supported by posts. The south third of the building is built up on stilts and contains a wrap-around porch.

The shed contains a rectangular plan, a salt box style roof covered in corrugated metal, vertical flush T-111 plywood siding, and is situated on a concrete foundation. The south elevation contains a shed door.

The garage contains a rectangular plan that measures approximately 16 by 20 feet. It contains a moderately-pitched roof covered in composite shingles, and original shiplap siding. The majority of the garage door opening is covered with a tarp.

Photographs:

Façade of residence, facing northwest.

Southwest elevation of horse barn, facing northeast.

CONTINUATION SHEET

Property Name: 11291 Race Track Road

Photographs (continued):

Southeast corner of garage, facing northwest.

Southwest corner of shed, facing northeast.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #:** (Assigned by recorder) Field No. DG-1

P1. Other Identifier: _____

***P2. Location:** ☒ **Not for Publication** ☐ **Unrestricted** ***a. County** Tuolumne
and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Sonora **Date** 1948 (1987) **T** 1N ; **R** 14E ; NE ¼ **of** NE ¼ **of Sec** 35 ; MDM **B.M.**

c. Address _____ City _____ Zip _____

d. UTM: (Give more than one for large and/or linear resources) Zone 10 , 728600 mE/ 4207800 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This minor historic archaeological resource consists of a trench-like prospect 20 feet long, four feet wide and eight feet deep. The trench is situated on a hill slope above and south of the house at 11291 Racetrack Road. Tailings of earth and waste rock are piled on the north side of the trench. A shallow depression less than one foot deep on the west side of the trench is about five feet long and four feet wide. The entire site is about 30 feet northeast-southwest and 20 feet northwest-southeast including tailings.

***P3b. Resource Attributes:** (List attributes and codes) AH9. Mine

***P4. Resources Present:** ☐Building ☐Structure ☐Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) Looking SE; 9-20-2014. Duff-covered backdirt

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐ Prehistoric ☐ Both
1880s estimated

***P7. Owner and Address:**
City of Sonora
94 North Washington Street
Sonora, CA 95370

***P8. Recorded by:** (Name, affiliation, and address) Ric Windmiller
Consulting Archaeologist
2280 Grass Valley Hwy. #205
Auburn, CA 95603

***P9. Date Recorded:** 9-29-2014

***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Windmiller, R. and K. Vallaire. 2014. Dragoon Gulch Master Trails Plan Cultural Resources Inventory and Evaluation, Sonora, Tuolumne County, California. Ric Windmiller, Consulting Archaeologist. Submitted to Development Impact, Inc. Copies available from the Central California Information Center, California State University-Stanislaus, Turlock.

***Attachments:** ☐NONE ☒Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List): _____

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
HRI# _____
Trinomial _____

Page 2 of 2 *Resource Name or # (Assigned by recorder) Field No. DG-1
*Map Name: Sonora *Scale: 1:24,000 *Date of map: 1948 (1987)

*Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 ***Resource Name or #:** (Assigned by recorder) Field No. DG- 2

P1. Other Identifier: _____

***P2. Location:** ☒ **Not for Publication** ☐ **Unrestricted** ***a. County** Tuolumne
and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** Sonora Date 1948 (1987) **T** 1N ; **R** 14E ; NE ¼ **of** NE ¼ **of Sec** 35 ; MDM **B.M.**

c. Address _____ City _____ Zip _____

d. UTM: (Give more than one for large and/or linear resources) Zone 10 , 728640 mE/ 4207820 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This minor historic archaeological resource is a small quartz mine shaft with an associated small tailings dump. The site measures 42 feet east-west and 33 feet north-south. The approximately 20 feet deep shaft is surrounded by a fence of metal t-posts and sheep wire. The tailings lie on the east side of the shaft. A proposed trail route crosses a portion of the tailings dump.

***P3b. Resource Attributes:** (List attributes and codes) AH9. Mine

***P4. Resources Present:** ☐Building ☐Structure ☐Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) Looking NE; 9-29-2014

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐ Prehistoric ☐ Both
1880s (estimated)

***P7. Owner and Address:**
City of Sonora
94 North Washington Street
Sonora, CA 95370

***P8. Recorded by:** (Name, affiliation, and address) Ric Windmiller
Consulting Archaeologist
2280 Grass Valley Hwy. #205
Auburn, CA 95603

***P9. Date Recorded:** 9-29-2014

***P10. Survey Type:** (Describe)
Intensive

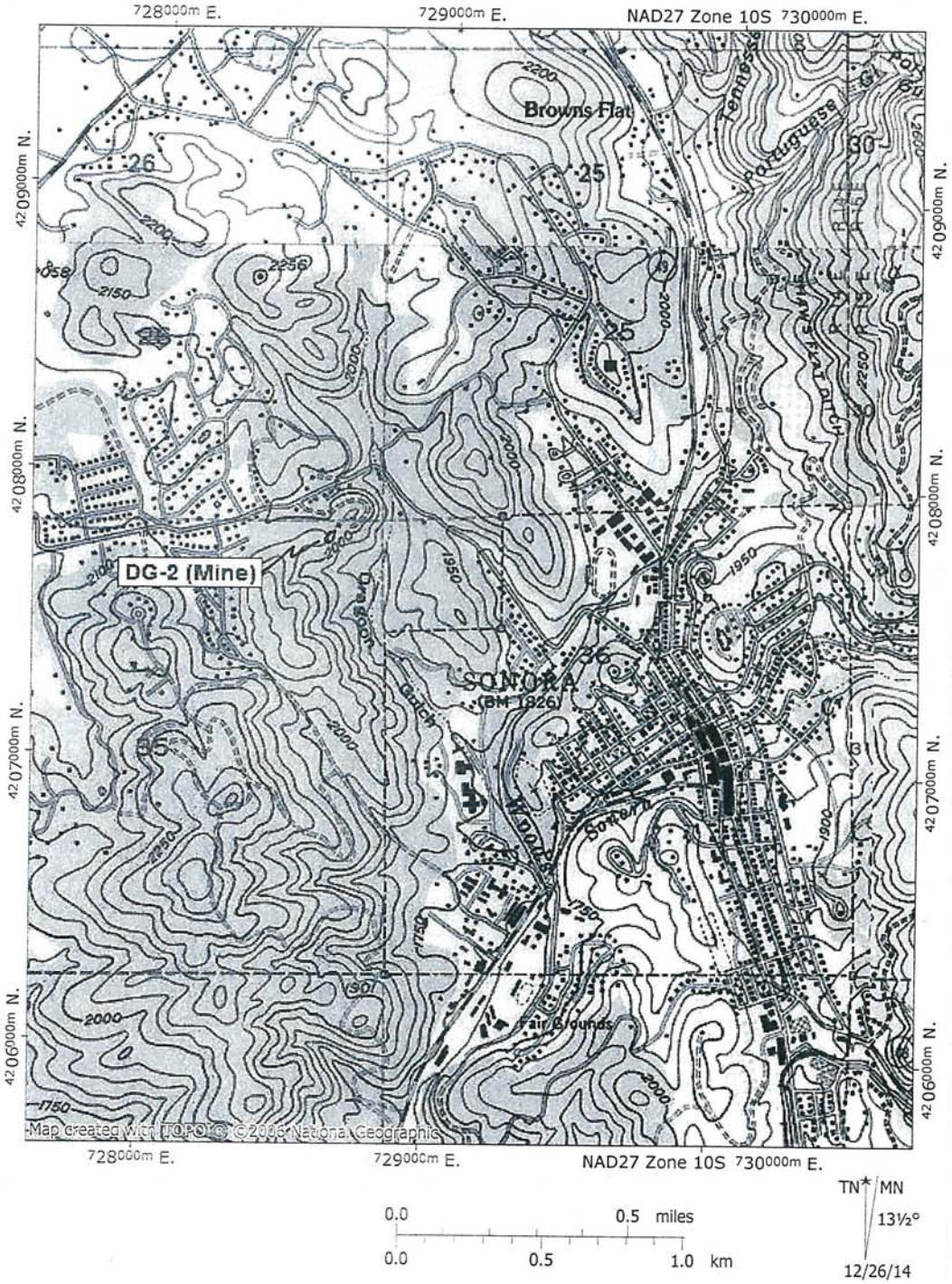
***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Windmiller, R. and K. Vallaire. 2014. Dragoon Gulch Master Trails Plan Cultural Resources Inventory and Evaluation, Sonora, Tuolumne County, California. Ric Windmiller, Consulting Archaeologist. Submitted to Development Impact, Inc. Copies available from the Central California Information Center, California State University-Stanislaus, Turlock.

***Attachments:** ☐NONE ☒☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List): _____

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
HRI# _____
Trinomial _____

Page 2 of 2
*Map Name: Sonora
*Resource Name or # (Assigned by recorder) Field No. DG-2
*Scale: 1:24,000
*Date of map: 1948 (1987)



*Required information

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code _____
Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 2 *Resource Name or #: (Assigned by recorder) Field No. DG- 3

P1. Other Identifier: _____

***P2.** **Location:** ☒ **Not for Publication** ☐ **Unrestricted** ***a. County** Tuolumne
and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b.** **USGS 7.5' Quad** Sonora Date 1948 (1987) **T** 1N ; **R** 14E ; NE **¼ of** NE **¼ of Sec** 35 ; MDM **B.M.**

c. Address _____ City _____ Zip _____

d. UTM: (Give more than one for large and/or linear resources) Zone 10 , 728540 mE/ 4207840 mN

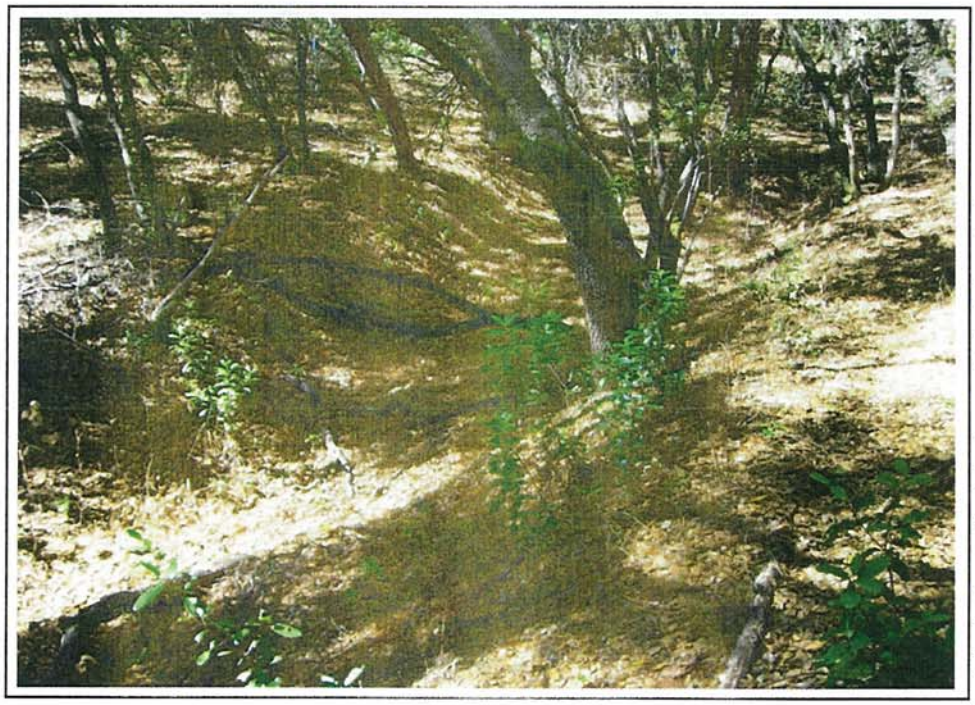
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

***P3a.** **Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This minor historic archaeological resource is the collapsed portal of a small mine tunnel and a tailings dump. The site is located on the north side of the same hill on which field designation DG-1 and DG-2 are situated. The site lies about 20 feet (vertical elevation) below the hill's summit. A broad, 12 foot wide trench leads from the flat topped tailings dump to the mine portal. From tunnel portal to the tailings dump is about 40 feet. The entire site measures approximately 50 feet north-south and 15 feet east-west. A proposed trail route crosses a portion of the tailings dump.

***P3b.** **Resource Attributes:** (List attributes and codes) AH9. Mine

***P4.** **Resources Present:** ☐Building ☐Structure ☐Object ☐ Site ☐ District ☐ Element of District ☒ Other (Isolates, etc.)



P5b. Description of Photo: (view, date, accession #) Looking SE at collapsed portal; 9-29-2014

***P6. Date Constructed/Age and Sources:** ☒ Historic ☐ Prehistoric ☐ Both
1880s (estimated)

***P7. Owner and Address:**
City of Sonora
94 North Washington Street
Sonora, CA 95370

***P8. Recorded by:** (Name, affiliation, and address) Ric Windmiller
Consulting Archaeologist
2280 Grass Valley Hwy. #205
Auburn, CA 95603

***P9. Date Recorded:** 9-29-2014

***P10. Survey Type:** (Describe)
Intensive

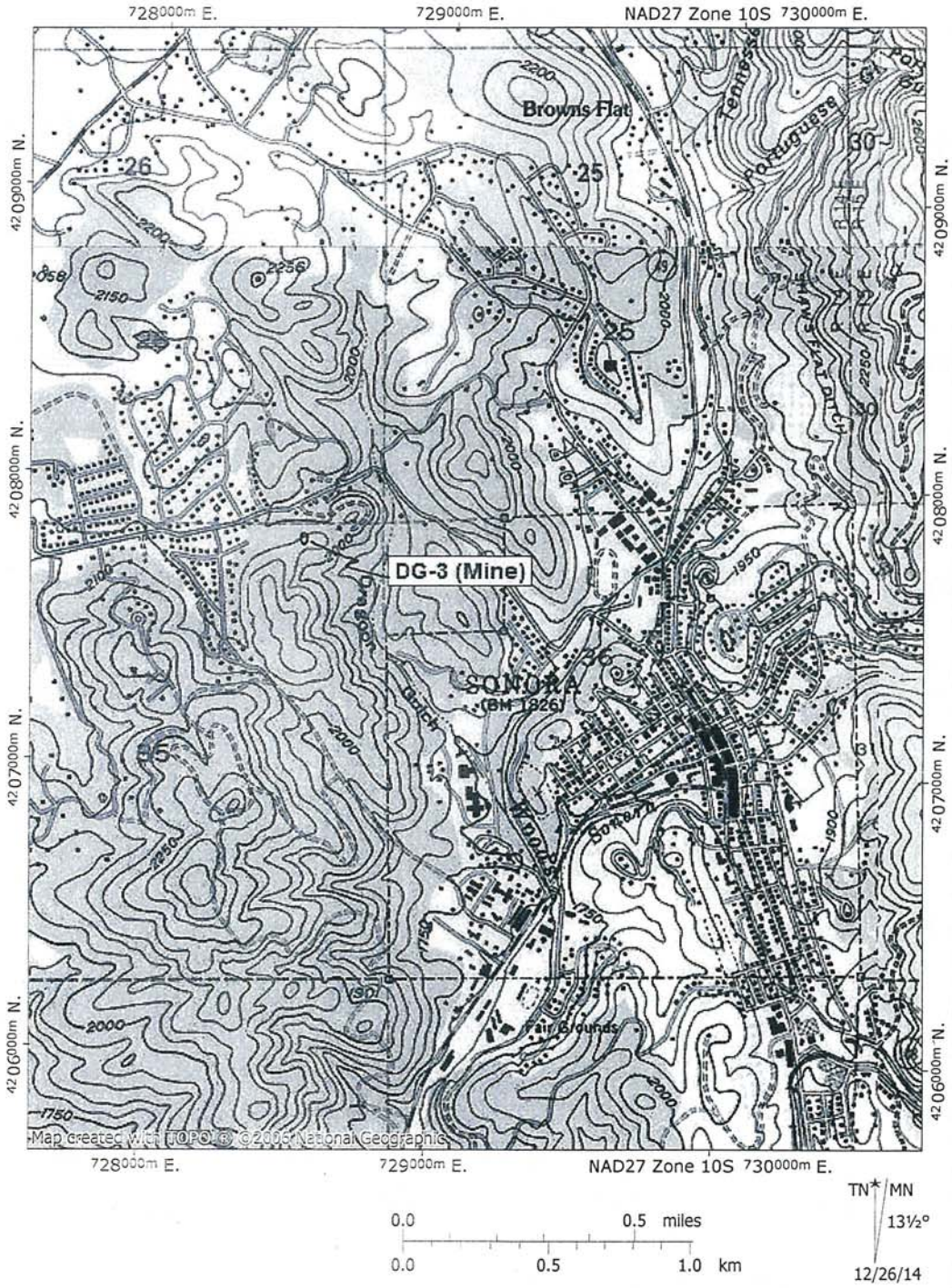
***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") Windmiller, R. and K. Vallaire. 2014. Dragoon Gulch Master Trails Plan Cultural Resources Inventory and Evaluation, Sonora, Tuolumne County, California. Ric Windmiller, Consulting Archaeologist. Submitted to Development Impact, Inc. Copies available from the Central California Information Center, California State University-Stanislaus, Turlock.

***Attachments:** ☐NONE ☒☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List): _____

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
HRI# _____
Trinomial _____

Page 2 of 2 *Resource Name or # (Assigned by recorder) Field No. DG-3
*Map Name: Sonora *Scale: 1:24,000 *Date of map: 1948 (1987)



*Required information

State of California ▯ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Review Code | Reviewer | Date | Listings

*P2. **Location:** ☐ **Not for Publication** ✳ **Unrestricted** Field # DG-4

*a. **County** Tuolumne **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. **USGS 7.5' Quad** Sonora, Calif. **Date** 1948 (rev. 1987) **T** 2N; **R** 14E; NE ¼ **of** NE ¼ **of Sec** 35 ; MD **B.M.**

c. Address _____ City Sonora Zip 95370

d. UTM: (Give more than one for large and/or linear resources) Zone ___, _____ mE/ _____ mN

e. Other Locational Data: From Sonora at Highway 49 and Snell Street, take Snell Street east for approximately 0.3 miles until the street turns to Bonanza Road. Go one block and turn right onto Calaveras Street. Go one block and turn left onto Alpine Lane. Take Alpine Lane approximately 0.1 miles and turn left. Go one block through the gate to the Alpine Lane parking lot and park. Walk on the Dragoon Gulch trail to the north for approximately 0.3 miles (it will turn to the southwest). The site will be located on the trail near a bench.

*P3a. **Description:** This resource is a site that consists of three distinct features associated with hard rock mining activities. The site includes a prospect pit, a tailings pile, and a (possibly hydraulic) mining area. Also present are a segment of an old road (Site 5) and ditch (Site 7). The site is located on the west side of Dragoon Gulch on a slightly sloping terrace, surrounded by oak trees and manzanita. An existing Dragoon Gulch trail (City of Sonora) passes through the site and is paved. The site is in good condition.

*P3b. **Resource Attributes:** AH9. Mines/Tailings/Quarries

***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ✳ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: Photo #3168, Overview of Site 3 facing NE

***P6. Date Constructed/Age and Source:** ✳ Historic ☐ Prehistoric ☐ Both

late 1880s (City of Sonora 2014)

***P7. Owner and Address:**
City of Sonora
94 N. Washington Street
Sonora, CA 95370

***P8. Recorded by:** (Name, affiliation, and address) Katie Vallaire
3708 Bigler Way
Sacramento, CA 95817

***P9. Date Recorded:** 9/29/2014

***P10. Survey Type:** (Describe)

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.")

***Attachments:** ☐NONE ✳Location Map ☒Continuation Sheet ☐Building, Structure, and Object Record ✳Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☒Photograph Record ☐ Other (List): Sketch Map

ARCHAEOLOGICAL SITE RECORD

 *Resource Name or #: ~~Site 3~~ DG-4

*A1. Dimensions: a. Length: 100 feet (N/S) × b. Width: 100 feet (E/W)
Method of Measurement: ☐ Paced ☐ Taped ☒ Visual estimate ☐ Other:
Method of Determination (Check any that apply.): ☐ Artifacts ☒ Features ☐ Soil ☐ Vegetation ☐ Topography
☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☒ High ☐ Medium ☐ Low Explain:

Limitations (Check any that apply): ☐ Restricted access ☒ Paved/built over ☐ Site limits incompletely defined
☐ Disturbances ☐ Vegetation ☐ Other (Explain):

A2. Depth: ☐ None ☒ Unknown Method of Determination:
*A3. Human Remains: ☐ Present ☐ Absent ☐ Possible ☒ Unknown (Explain): No ground disturbance was conducted

*A4. Features:
Feature 1 is a prospect pit measuring 17 feet N/S by 16 feet E/W by 5 feet deep.
Feature 2 is a tailings pile measuring 36 feet SW/NE by 20 feet NW/SE.
Feature 3 is a (possibly hydraulic) mining area measuring approximately 75 feet long, 10 feet deep, 40-50 feet wide at the NW end and 6 feet wide at the SE end near the trail.
See sketch map for locations.
(Site 5 is an old road that travels through the site; Site 7 is a small ditch that travels through the site. See Site 5 and Site 7 records)

*A5. Cultural Constituents No artifacts were observed.

*A6. Were Specimens Collected? ☒ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)
*A7. Site Condition: ☒ Good ☐ Fair ☐ Poor (Describe disturbances.): Paved trail travels through center of site.

*A8. Nearest Water: Dragoon Gulch, a perennial stream, is located approximately 250 feet to the east

*A9. Elevation: 1900 MASL

A10. Environmental: The site is situated on a gently sloping terrace just west of Dragoon Gulch in a California foothill oak woodland. Vegetation includes oak trees, grey pines, manzanita, redbud, California bay, ferns, grasses, and various native shrubs. Evidence of deer, woodpeckers, and hawks were noted.

A11. Historical Information:
In the late 1880s, Dragoon Gulch witnessed a surge in hard rock mining activities. According to the City of Sonora, hard rock mining activities are still evident along the Dragoon Gulch trails (City of Sonora 2014).

*A12. Age: ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☒ 1880-1914 ☐ 1914-1945
☐ Post 1945 ☐ Undetermined **Describe position in regional prehistoric chronology or factual historic dates if known:**

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

City of Sonora, 2014. "The History of Dragoon Gulch," electronic resource available at http://www.sonoraca.com/visitsonora/Dragoon/History.pdf.

A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record.): See photo record.

Original Media/Negatives Kept at: Ric Windmiller, 2280 Grass Valley Hwy. #205, Auburn, CA 95603
*A17. Form Prepared by: Katie Vallaire Date: 9/29/2014
Affiliation and Address: Ric Windmiller, 2280 Grass Valley Hwy. #205, Auburn, CA 95603

State of California ▯ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PHOTOGRAPH RECORD

Primary
HRI
Trinomial

#
ai

Camera Format: Digital Field # DCA-4 Lens Size:
Film Type and Speed: **Negatives Kept at:** Ric Windmiller, 2280 Grass Valley Hwy. #205 Auburn, CA 95603

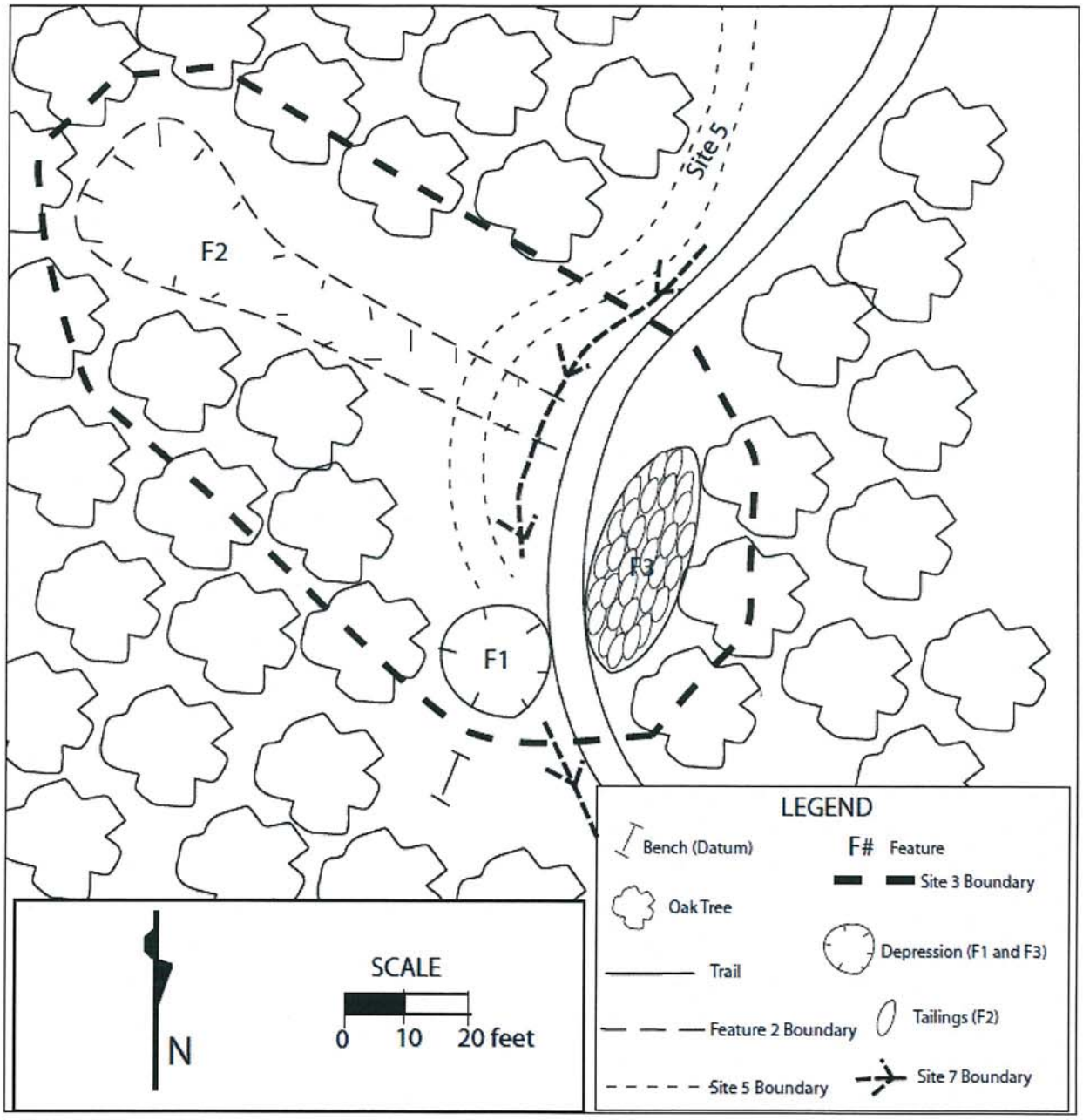
Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
09	29		3168	Site 3 overview; prospect pit (Feature 1) in foreground, tailings pile (Feature 2) in background	NE	
09	29		3169	Prospect pit (Feature 1); taken from existing trail	N	
09	29		3170	Tailings pile (Feature 2); taken from existing trail	NE/E	
09	29		3171	Mining area (Feature 3); taken from old road (Site 5)	SW	

State of California ▯ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

SKETCH MAP

Primary #
HRI#
Trinomial

*Drawn by: Katie Vallaire *Date of map: 09/29/2014 Field # DG-4



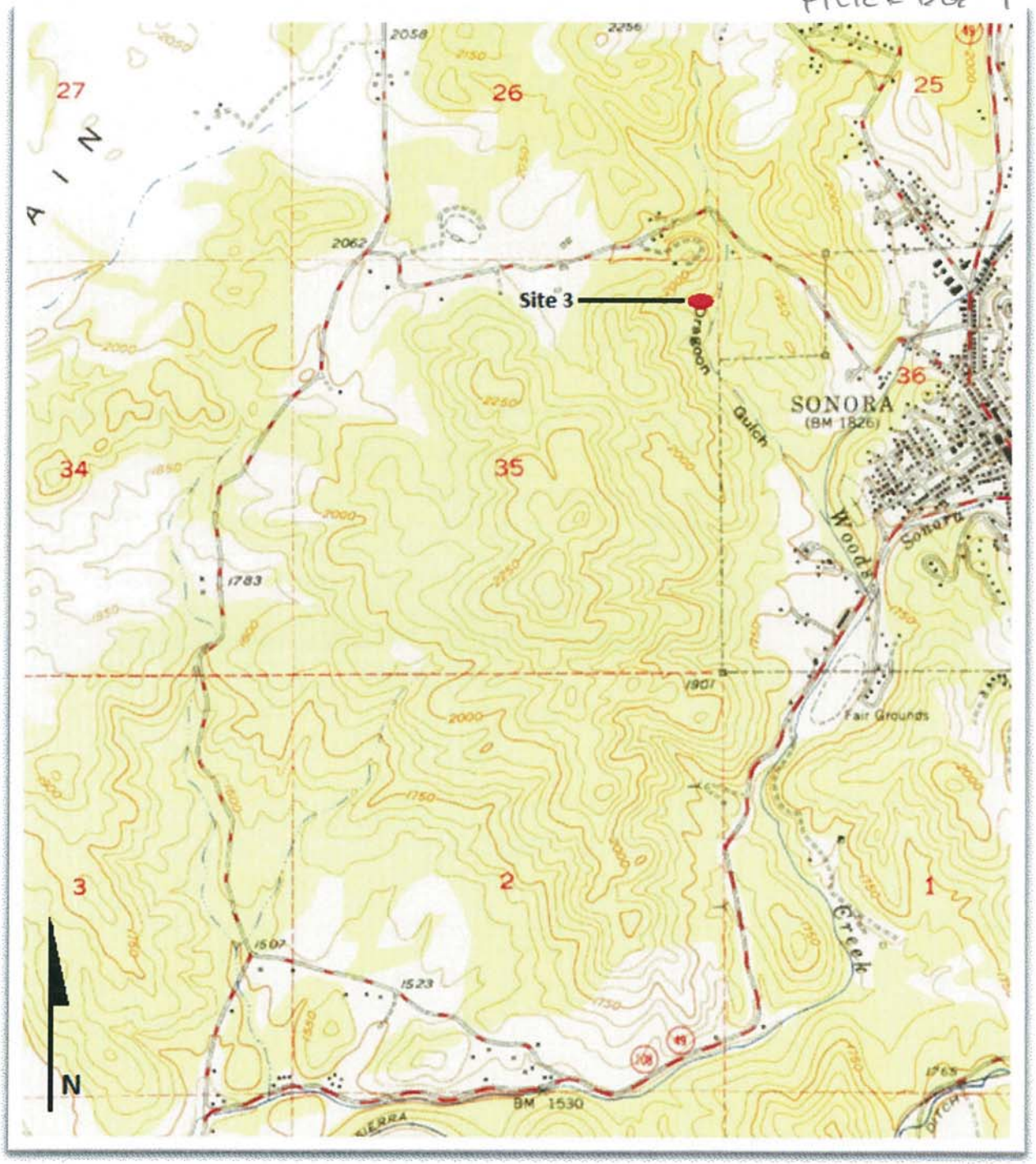
DPR 523K (9/2013) NOTE: Include bar scale and north arrow.

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Field # DG-4



* Required information

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary#
HRI #
Trinomial

CONTINUATION SHEET

Property Name: _____
Page _____ of _____

Field # DG-4

Photographs:

3169: Prospect pit (Feature 1); taken from existing trail, N.

3170: Tailings pile (Feature 2); taken from existing trail, NE/E.

3171: Mining area (Feature 3); taken from old road (Site 5), SW.

State of California ▯ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Review Code | Reviewer | Date | Listings

*P2. **Location:** ☐ **Not for Publication** ✳ **Unrestricted** Field # DG-5

*a. **County** Tuolumne **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. **USGS 7.5' Quad** Sonora, Calif. **Date** 1948 (rev. 1987) **T** 2N; **R** 14E; NE ¼ **of** NE ¼ **of Sec** 35 ; MD **B.M.**

c. Address _____ City Sonora Zip 95370

d. UTM: (Give more than one for large and/or linear resources) Zone __, _____ mE/ _____ mN

e. Other Locational Data: From Sonora at Highway 49 and Snell Street, take Snell Street east for approximately 0.3 miles until the street turns to Bonanza Road. Go one block and turn right onto Calaveras Street. Go one block and turn left onto Alpine Lane. Take Alpine Lane approximately 0.1 miles and turn left. Go one block through the gate to the Alpine Lane parking lot and park. Walk on the Dragoon Gulch trail to the north for approximately 100 feet. Turn southwest and follow this trail for approximately 0.2 miles. The ditch is located approximately 50 feet west of the trail.

*P3a. **Description:** This resource is a small abandoned earthen ditch that parallels a barbed wire fence. The segment recorded is approximately 25 feet long. It runs down a hill in a southwest to northeast direction, towards Dragoon Gulch. It measures approximately 4 feet wide by 1 foot deep. It is covered in duff and overgrowth.

*P3b. **Resource Attributes:** HP20. Canal/Aqueduct

*P4. **Resources Present:** ☐ Building ☒Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: Photo #3173; Small ditch #1 covered in duff, facing west.

*P6. **Date Constructed/Age and Source:** ✳ Historic ☐ Prehistoric ☐ Both

late 1880s (City of Sonora 2014)

*P7. **Owner and Address:**
City of Sonora
94 N. Washington Street
Sonora, CA 95370

*P8. **Recorded by:** (Name, affiliation, and address) Katie Vallaire
3708 Bigler Way
Sacramento, CA 95817

*P9. **Date Recorded:** 9/29/2014

*P10. **Survey Type:** (Describe)

*P11. **Report Citation:** (Cite survey report and other sources, or enter "none.")

*Attachments: ☐NONE ✳Location Map ☐Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record

☐ Other (List): _____

State of California ▯ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Small ditch #1 / Field # DG-5 ***NRHP Status Code** 6Z

B1. Historic Name: unknown

B2. Common Name: N/A

B3. Original Use: water conveyance B4. Present Use: abandoned

***B5. Architectural Style:** earthen ditch ***B6. Construction History:** This ditch was constructed presumably between 1880 and 1949. It has been abandoned for some time, as evidenced by its erosion and overgrowth.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:** N/A **Original Location:** N/A

***B8. Related Features:** None observed.

B9a. Architect: unknown b. Builder: unknown

***B10. Significance: Theme** N/A **Area** Sonora, California

Period of Significance N/A **Property Type** water conveyance **Applicable Criteria** N/A

The city of Sonora was established in 1849 as a result of the Gold Rush. Dragoon Gulch was named after a group of gold miners who were ex-cavalry soldiers of the United States Army. In 1851, Sullivan Creek Water Company provided the miners in Dragoon Gulch with the first outside water supply via a ditch from Sullivan's Creek. In late 1852, the Tuolumne County Water Company completed their own water conveyance system in the gulch.

Placer mining activities in Dragoon Gulch diminished around 1860. In 1880, the area witnessed its fair share of hard rock (lode) mining activities. During this time, lode mining activities substantially changed Dragoon Gulch's cultural landscape.

It is unknown who constructed this ditch; there are no known records pertaining to the water conveyance systems in Dragoon Gulch from Sullivan Creek Water Company or Tuolumne County Water Company. It is in poor condition and is not a good example of a particular style or a method of construction. It is simply a utilitarian structure associated with water conveyance in the area. Furthermore, it is not associated with a person significant in local or national history; nor is it associated with a specific historic event. It is unlikely to yield archaeological data important to future researchers. Therefore, this ditch does not appear eligible for listing on the California Register of Historical Resources under Criteria 1, 2, 3, or 4.

B11. Additional Resource Attributes: (List attributes and codes) N/A

***B12. References:**

City of Sonora, 2014. "The History of Dragoon Gulch," electronic resource available at http://www.sonoraca.com/visitsonora/Dragoon/History.pdf.

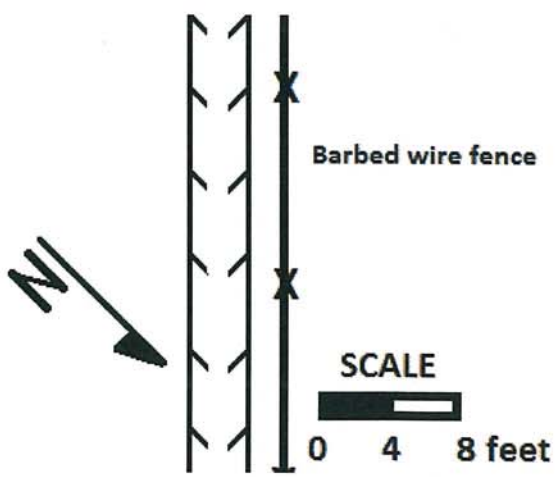
B13. Remarks: None.

***B14. Evaluator:** Katie Vallaire

***Date of Evaluation:** 10/30/2014

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

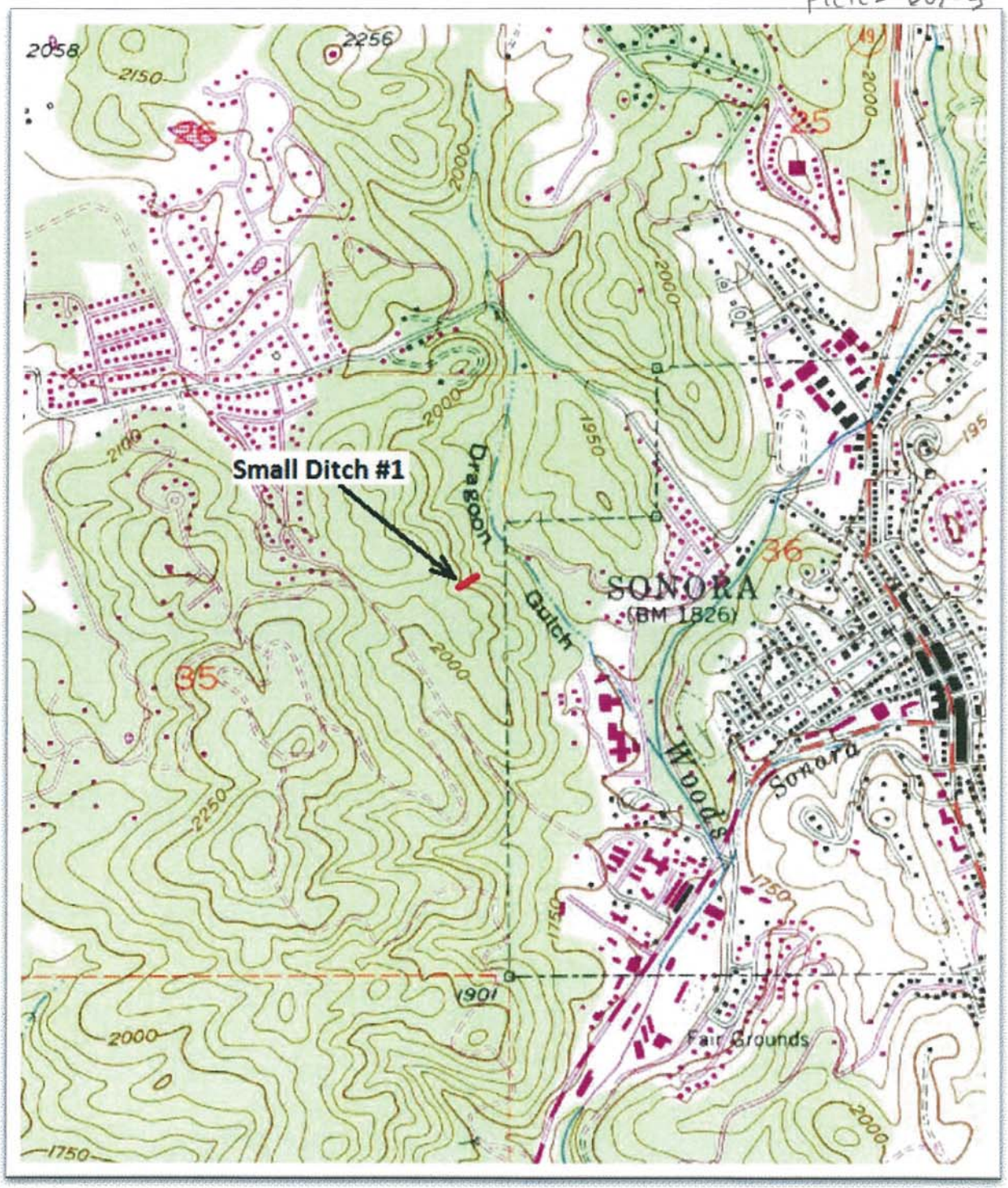


State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Field # OG-5



* Required information

KD Anderson & Associates, Inc.
Transportation Engineers

September 22, 2014

Ms. Paula Daneluk
DEVELOPMENT IMPACT, INC.
5050 Laguna Blvd., Suite 112-613
Elk Grove, CA 95758
pmdaneluk@gmail.com

RE: TRAFFIC IMPACT ASSESSMENT FOR DRAGOON GULCH TRAILS MASTER PLAN, SONORA, CA

Dear Ms. Daneluk:

Thank you for contacting our firm regarding the Dragoon Gulch Trails Master Plan Project. As we understand, the project involves creation of nearly 7½ miles of trails on a 67 acre site administered by the City of Sonora. The plan includes creation of a 20 space parking area near a new Race Track Road trailhead which will serve as a gathering point for walkers, hikers, runners and cyclists. Access for initial phases will remain via the Alpine Lane trailhead.

Existing Setting. The Dragoon Gulch Trails Project is located on the western edge of the City of Sonora and is accessed by the City and Tuolumne County local and collector streets in this area.

State Route 49, Snell Street, Race Track Road, Forest Road and Jamestown Road are the primary arterials and collector streets serving the western Sonora area. The existing trail head is located off of Alpine Lane, a local street that is connected to the arterial collector system via other local streets such as Calaveras Way, Bonanza Road, Spring Hill Road and Arbona Circle. These local streets are generally 22-24 feet wide. All lack sidewalks and on-street parking occurs. The 25 mph prima facie residential speed limit applies on these streets.

The project includes access to Race Track Road. Race Track Road is a Tuolumne County maintained rural minor collector street that connects Jamestown Road to the west with Snell Street and downtown Sonora to the east. In the area of the project Race Track Road is 18-22 feet wide with no shoulders. The posted speed limit is 25 mph. New traffic counts conducted on Race Track Road for this study in September 2014 indicated that the road carried 3,463 vehicles on a Friday and 2,766 vehicles on a Saturday as noted in Figure 1. The Tuolumne County Transportation Council (TCTC) has developed Level of Service (LOS) thresholds for roadway segments that have been adopted by Tuolumne County and the City of Sonora for environmental evaluation. These thresholds, which are presented in the 2007 Regional Transportation Plan (RTP), indicate that Race Track Road operates at LOS B on weekday and weekends. LOS B satisfies the RTP's minimum LOS B standard employed for minor collector roads and the LOS C standard for minor collectors within ½ mile of major collector streets.

1. Race Track Road: 3463 vehicles on Friday / 2,766 on Saturday
2. Alpine Lane at Trail Head: 90 vehicles on Friday / 87 on Saturday

KD Anderson & Associates, Inc.
Transportation Engineers
2305-01 LT 9/22/2014

EXISTING TRAFFIC VOLUMES

figure 1

Pedestrian and bicycle access to the site would be available via the same roadways that provide vehicular access. However, no dedicated pedestrian or bicycle facilities exist along Race Track Road. Pedestrians generally use unimproved shoulders but in many locations restrictions created by vegetation require pedestrians to share the roadway with motor vehicles for short distances. However, these transportation modes are not regularly used in the rural area west of Sonora. The *Tuolumne County Bikeway and Trails Plan*[1] includes the following recommendations for this area, although no funding has been identified:

Widen shoulders along Snell Street from Washington Street to Race Track Road. Continue widening along Race Track Road to Jamestown Road. Combination bicycle and pedestrian facilities should be provided and an asphaltic curb, at minimum, should separate the non-motorized facility from motorized traffic.

Project Characteristics. The amount of additional vehicular traffic that may be generated by the completion of the Master Plan has been estimated. Typically, traffic engineers assume that an unlimited number of potential visitors / customers are available and that trip generation will be in proportion to the size of the use. This assumption is generally confirmed in trip generation rates published nationally by the Institute of Transportation Engineers (ITE). However, because specific national data is not available relative to "active" parks with trails, original trip generation rates based on observation of current activity were developed for this study.

The existing Dragoon Gulch trail system attracts visitors who drive to the site and park at the trail head on Alpine Lane. New daily traffic volume counts were made on Alpine Lane at the trail head in September 2014 to quantify the amount of vehicular traffic already being generated by the existing trails. Those counts revealed that the trail system generated 90 vehicle trips (i.e., ½ inbound and ½ outbound) on Friday September 5th and 87 trips on Saturday September 6th. The highest volume hour on Friday occurred from 8:15 to 9:15 a.m. (i.e., 22 trips). Traffic was dispersed on Saturday, and the highest volume (i.e., 14 trips) hour occurred from 4:30 to 5:30 p.m.

In this case, the project could be described and trip generation estimated in terms of its acreage or in terms of the number of trail miles. Table 1 identifies the number of daily and peak hour trips counted at the entrance to the existing trail head and uses that information to calculate trip generation rates on a "per acre" and "per mile of trail" basis. As noted, the per acre rates are generally in the range of ITE data for "Parks".

[1] Tuolumne County Bikeways and Trails Plan, Tuolumne County Transportation Council

KDA

TABLE 1
TRIP GENERATION RATES

Day	Quantity / Unit	Trips / Trip Generation Rates									
		Daily	AM Peak Hour (7:00 to 9:00 a.m.)			PM Peak Hour (4:00 to 6:00 p.m.)			Peak Hour of Generator (8:15 to 9:15 a.m.)		
			In	Out	Total	In	Out	Total	In	Out	Total
Based on Acreage											
Friday	35 acres	90	10	10	20	7	6	13	9	13	22
	acre	2.57	50%	50%	0.57	54%	46%	0.37	41%	59%	0.60
Saturday	35 acres	87	6	4	10	4	10	14	-	-	-
	acre	2.49	60%	40%	0.29	29%	71%	0.40	-	-	-
Based on Miles of Trails											
Friday	2.5 miles	90	10	10	20	7	6	13	9	13	22
	mile	36.00	50%	50%	8.00	54%	46%	5.20	41%	59%	8.80
Saturday	2.5 miles	87	6	4	10	4	10	14	-	-	-
	mile	34.80	60%	40%	4.00	29%	71%	5.60	-	-	-
Data from ITE Trip Generation Manual, 9th Edition											
City Park ITE Weekday	acre	1.89	-	-	-	-	-	-	-	-	-
County Park ITE Weekday	acre	2.28	61%	39%	0.02	61%	39%	0.09	35%	65%	0.59
County Park ITE Saturday	acre	12.14	-	-	-	-	-	-	57%	37%	2.21

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The existing site generates trips throughout the day. However, the traffic counts conducted for this study revealed minimum traffic during the period from 9:00 p.m. to 6:00 a.m.

TABLE 2
DISTRIBUTION OF DAILY TRAFFIC

Day	Daily Trips		
	9:00 p.m. to 6:00 a.m.	6:00 a.m. to 9:00 pm.	Total
Friday	3	87	90
Saturday	3	84	87

The trip generation rates shown in Table 1 have been used to estimate the amount of additional vehicular traffic that might be attracted to the site when the Master Plan is completed. For this analysis estimates have been made based on both parameters, and the average of the two has been assumed to be the best indicator of site trip generation. As shown in Table 3, the proposed project is expected to add 221 daily trips on a weekday, with 49 and 32 trips occurring during the a.m. and p.m. peak hour, respectively, with 54 trips in the highest volume hour. On Saturday, the project is expected to generate 214 daily trips, with 25 trips generated during the a.m. peak hour and 35 trips occurring during the p.m. peak hour.

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TABLE 3
TRIP GENERATION FORECASTS

Day	Quantity / Unit	Trips / Trip Generation rates									
		Daily	AM Peak Hour (7:00 to 9:00 a.m.)			PM Peak Hour (4:00 to 6:00 p.m.)			Peak Hour of Generator (8:15 to 9:15 a.m.)		
			In	Out	Total	In	Out	Total	In	Out	Total
Based on Acreage											
Friday	67 acres	172	19	19	38	13	12	25	17	25	42
	7.5 miles	270	30	30	60	21	18	39	27	39	66
	Average	**221**	**25**	**24**	**49**	**17**	**15**	**32**	**22**	**32**	**54**
Saturday	67 acres	167	12	7	19	8	19	27	-	-	-
	7.5 miles	261	18	12	30	12	30	42	-	-	-
	Average	**214**	**15**	**10**	**25**	**10**	**25**	**35**	**-**	**-**	**-**

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Project Traffic Impacts. The trips generated by the project will be added to the local and collector streets that provide access to the site. These trips will be divided between Dragoon Gulch's two access points off of Alpine Lane and Race Track Road. At the Race Track Road access project trips will be headed easterly and westerly on that collector street.

The relative impact of project trips has been considered. The project could add a small amount of traffic to Alpine Lane and the other local streets serving the existing trailhead. However, the project would likely add less than 100 daily trips which would not have an appreciable effect on the quality of traffic flow or safety in this area. A "worst case" assessment of impacts to Race Track Road was performed assuming 100% of the project trips used that new trailhead and head in one direction on Race Track Road. As noted in Table 4, under those assumptions Race Track Road would still operate at LOS B under Existing Plus Project conditions.

TABLE 4
LEVELS OF SERVICE ON RACE TRACK ROAD

Location	Daily Traffic Volume and Level of Service				
	Base		Base Plus Project		
	Daily Volume	LOS	Daily Volume		LOS
			Project[1]	Only	
Existing Conditions Baseline					
Race Track Road - Friday	3,463	B	221	3,684	B
Race Track Road - Saturday	2,766	B	214	2,980	B
Cumulative Conditions Baseline					
Race Track Road – Weekday	2,800[2]	B	221	3,021	B
Race Track Road -Saturday	2,240	B	214	2,454	B

(1) worst case assumption that 100% of project traffic is added to Race Track Road in one direction
(2) 2007 RTP Figure 11, Average Daily Traffic volume and Level of Service 2030 conditions

Cumulative Traffic Impacts. A similar Level of Service analysis was made assuming that the volume of traffic on Race Track Road is as noted in the 2007 RTP. RTP Figure 11 notes that the volume of traffic on Race Track Road under long term conditions would not be appreciably different from that occurring today and in fact may be less due to the effects of major regional circulation system improvements. Under these conditions the "worst case" assignment of project traffic would not alter the projected Level of Service, which would remain at LOS B.

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Safety. The project's impacts to Race Track Road were also determined based on safety at the project access, and three issues were evaluated. First, is sight distance at this location adequate? Secondly, does the amount of traffic anticipated at this location justify a separate left turn lane on Race Track Road? Third, are measures needed to facilitate pedestrian or bicycle access?

Sight Distance. The available sight distance on Race Track Road at the proposed access point was determined from field review. Measured from the location mandated under the Caltrans Highway Design Manual (HDM) (i.e., 15 feet from the edge of travel way) the view looking west is clear for 400 feet to the Bay Meadows Drive intersection where a crest vertical curve eventually blocks the view. While the alignment of Race Track Road is straight to the east, the view looking in that direction is blocked by trees in the orchard on the adjoining lot. With no improvements the view is roughly 100 feet. Depending on which fruit trees are eliminated or trimmed, the view could be as long as 350 feet in that direction.

These available distances were compared to the minimum safe stopping sight distances noted in HDM Table 201.1 and the corner sight distance requirements noted in HDM Table 405.1A. For the posted speed limit of 25 mph, the minimum safe stopping sight distance is 150 feet, while the corner sight distance is 275 feet. These values increase to 250 and 385 feet respectively for travel at 35 mph. Based on these criteria the available sight distance exceeds the corner sight distance requirement for the posted speed limit looking to the west. However, it will be necessary to remove / trim some of the trees in the area east of the project access to provide sight distance meeting Tuolumne County standards for 25 mph. The exact limits of this work will need to be determined when plans are prepared for the project access.

Left Turn Channelization. The American Association of State Transportation and Highway Officials (AASHTO) has identified guidelines for the installation of left turn lanes in their publication *A Policy on Geometric Design of Highways and Streets*. These guidelines are employed by Caltrans District 10 and are presented in their Exhibit 9-75 and Table 5. The need for a left turn lane is based on the volume of traffic on the mainline road and the relative percentage of that traffic that turns left. These criteria are applicable to intersections where the major street traffic proceeds freely and side street traffic is controlled by stop signs.

To determine whether a left turn lane is required under AASHTO guidelines, the peak hour traffic volume on Race Track Road was identified (i.e., 4:30 p.m. - 5:30 p.m.: 129 eastbound and 189 westbound vehicles). It was then assumed that 100% of the inbound traffic generated during the peak hour of the generator (i.e., 22 vehicles) would turn left into the site. Table 5 was then entered with the observed opposing volume and the sum of project left turns and existing westbound traffic. As noted, left turns would represent 10% of the advancing volume under these, and this combination of advancing and opposing traffic falls well below the threshold that would justify a left turn lane.

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TABLE 5 TRAFFIC VOLUMES JUSTIFYING LEFT TURN LANES				
Opposing Volume (veh/hr)	**Advancing Volume (veh/hr)**			
	5% Left Turns	**10% Left Turns**	**20% Left Turns**	**30% Left Turns**
40-mph operating speed				
800	330	240	180	160
600	410	305	225	200
400	510	380	275	245
200	640	470	350	305
129	-	**211**	-	-
100	720	515	390	340
50-mph operating speed				
800	280	210	165	135
600	350	260	195	170
400	430	320	240	210
200	550	400	300	270
100	615	445	335	295
60-mph operating speed				
800	230	170	125	115
600	290	210	160	140
400	365	270	200	175
200	450	330	250	215
100	505	370	275	240

RED values are Existing Plus Project conditions
Source: *A Policy on Geometric Design of Highway and Streets, AASHTO, 2004.*

Pedestrian / Bicycle Safety. As with many rural roads in Tuolumne County, Race Track Road lacks facilities to accommodate pedestrians and bicyclists. While it is unlikely that an appreciable number of pedestrians or bicyclists would be attracted to the site via Race Track Road, those who elected to use these modes would face the existing limitations relating to available shoulders and obstructions. While construction of compete pedestrian and bicycle facilities as envisioned in the Tuolumne County Bikeways and Trails Plan is not justified as a project specific mitigation, it would be appropriate for Tuolumne County to review the conditions of shoulders in this area and act to remove obstructions within the right of way.

Thank you again for contacting our firm. Please feel free to contact me if you have any questions.

Sincerely,

KD Anderson & Associates, Inc.

Kenneth D. Anderson, P.E.
President

Dragoon Gulch Trails MP .ltr

Attachments: Traffic Counts

KDA

Prepared by NDS/ATD

Volumes for: Friday, September 05, 2014 City: Sonora Project #: 14-7556-001

Location: Race Track Road east of Bay Meadows Drive

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	2	27			2	21				
12:15	1	17			5	19				
12:30	0	26			3	36				
12:45	2	31	5	101	2	38	12	114	17	215
1:00	0	24			2	32				
1:15	2	31			1	38				
1:30	0	35			3	25				
1:45	1	24	3	114	1	24	7	119	10	233
2:00	2	20			0	33				
2:15	1	22			0	28				
2:30	2	21			1	22				
2:45	1	20	6	83	0	27	1	110	7	193
3:00	1	42			2	28				
3:15	0	18			3	52				
3:30	2	35			1	41				
3:45	6	32	9	127	0	41	6	162	15	289
4:00	0	24			1	35				
4:15	3	29			1	41				
4:30	3	29			0	40				
4:45	4	34	10	116	1	40	3	156	13	272
5:00	4	33			1	47				
5:15	6	33			1	62				
5:30	12	27			4	35				
5:45	8	25	30	118	1	31	7	175	37	293
6:00	6	32			1	42				
6:15	14	18			0	29				
6:30	18	30			3	32				
6:45	26	26	64	106	8	20	12	123	76	229
7:00	29	24			15	26				
7:15	33	25			9	29				
7:30	53	12			10	22				
7:45	63	16	178	77	22	25	56	102	234	179
8:00	44	21			25	24				
8:15	29	10			16	16				
8:30	32	5			19	19				
8:45	29	12	134	48	19	16	79	75	213	123
9:00	27	9			20	16				
9:15	21	9			11	25				
9:30	27	11			22	19				
9:45	40	14	115	43	19	12	72	72	187	115
10:00	21	6			23	35				
10:15	12	11			20	32				
10:30	26	7			24	15				
10:45	21	5	80	29	22	17	89	99	169	128
11:00	28	2			23	5				
11:15	26	4			23	2				
11:30	21	1			17	6				
11:45	22	6	97	13	28	2	91	15	188	28
Total	731	975	731	975	435	1322	435	1322	1166	2297
Combined Total	1706		1706		1757		1757		3463	
AM Peak	7:15 AM				11:45 AM					
Vol.	193				104					
P.H.F.	0.766				0.722					
PM Peak		4:30 PM				4:30 PM				
Vol.		129				189				
P.H.F.		0.949				0.762				
Percentage	42.8%	57.2%			24.8%	75.2%				

Prepared by NDS/ATD

Volumes for: Friday, September 05, 2014 City: Sonora Project #: 14-7556-002

Location: Alpine Lane between the little parking lot for Dragoon Gulch Trails and Eagle Lane

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	1			0	0				
12:15	0	0			0	0				
12:30	0	0			0	0				
12:45	0	0	0	1	0	0	0	0	0	1
1:00	0	0			0	0				
1:15	0	0			0	0				
1:30	0	0			0	0				
1:45	0	0	0	0	0	0	0	0	0	0
2:00	0	0			0	0				
2:15	0	2			0	2				
2:30	0	0			0	1				
2:45	0	0	0	2	0	0	0	3	0	5
3:00	0	0			0	1				
3:15	0	2			0	0				
3:30	0	0			0	0				
3:45	0	1	0	3	0	2	0	3	0	6
4:00	0	0			0	0				
4:15	0	1			0	1				
4:30	0	0			0	2				
4:45	0	2	0	3	0	0	0	3	0	6
5:00	0	3			0	4				
5:15	0	1			0	1				
5:30	0	0			0	2				
5:45	0	1	0	5	0	0	0	7	0	12
6:00	0	1			0	0				
6:15	0	0			0	0				
6:30	1	0			1	0				
6:45	0	0	1	1	1	0	2	0	3	1
7:00	2	0			0	3				
7:15	0	0			0	0				
7:30	1	2			1	0				
7:45	0	1	3	3	2	0	3	3	6	6
8:00	0	1			2	1				
8:15	4	1			5	1				
8:30	2	0			2	0				
8:45	4	0	10	2	1	0	10	2	20	4
9:00	3	0			1	1				
9:15	1	0			0	0				
9:30	0	0			2	0				
9:45	0	0	4	0	0	0	3	1	7	1
10:00	1	0			1	2				
10:15	1	0			0	0				
10:30	0	0			1	0				
10:45	0	0	2	0	0	0	2	2	4	2
11:00	1	0			0	0				
11:15	3	0			1	0				
11:30	0	0			0	0				
11:45	0	0	4	0	1	0	2	0	6	0
Total	24	20	24	20	22	24	22	24	46	44
Combined Total	44		44		46		46		90	
AM Peak	8:15 AM				7:45 AM					
Vol.	13				11					
P.H.F.	0.813				0.550					
PM Peak		4:15 PM				4:15 PM				
Vol.		6				7				
P.H.F.		0.500				0.438				
Percentage	54.5%	45.5%			47.8%	52.2%				

KD Anderson & Associates, Inc.
Transportation Engineers

October 2, 2014

Ms. Paula Daneluk, AICP
Development Impact, Inc.
5050 Laguna Boulevard, Suite 112-613
Elk Grove, CA 95758

Subject: ***Dragoon Gulch Trails Master Plan Project Air Quality Emissions Modeling***

Dear Ms. Daneluk:

On behalf of KD Anderson & Associates (KDA), I am pleased to submit this letter report presenting the results of air quality emissions modeling of the Dragoon Gulch Trails Master Plan project. This report presents our understanding of the project, a description of methods used in the emissions modeling, and the results of the emissions modeling.

Project Understanding

Our understanding is the proposed project consists of buildout of the Dragoon Gulch Recreational Area. Approximately 35 acres of the recreational area were previously developed. The proposed project would extend the existing trail system through the remaining 67 acres.

In addition to extending the trail system, the proposed project would include a new approximately 20-stall parking lot, a new access driveway, and other amenities (e.g., restroom and picnic area).

Our understanding is construction of the new trails would take place over a period of five years. The new trails would involve clearing and trail construction. Clearing activities would occur in March of each year, and would include burning brush piles. Trail construction would occur for a six-month period each year, and would involve use of a four-foot caterpillar dozer and four-foot tractor.

Methodology

The amount of emissions associated with the Dragoon Gulch Trails Master Plan project were primarily estimated using the CalEEMod emissions model. CalEEMod is a land use emissions computer model designed to provide a platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG)

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emissions associated with both construction and operation of a variety of land use projects. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

The CalEEMod model generates emissions estimates for an annual period, a summer daily period, and a winter daily period. Daily period emissions reported in this letter report are the greater of the summer daily period and winter daily period.

More detailed information on the CalEEMod emissions model is available at the internet website at http://caleemod.com/. Output files from the CalEEMod model are enclosed with this letter report.

The CalEEMod model does not report daily emissions associated with burning of brush piles. Therefore, these emissions this activity were estimated using information from the U.S. Environmental Protection Agency (EPA) document *AP-42 – Compilation of Air Pollutant Emission Factors*. More detailed information on AP-42 is available at the EPA internet website http://www.epa.gov/ttn/chief/ap42/index.html.

The emissions estimates presented in this letter report are based on project information from three sources:

- a *Project Description* provided by you on August 29, 2014;
- supplemental project information provided in a September 30, 2014 E-mail message from you; and
- the September 22, 2014 letter report to you from Ken Anderson of KDA *Re: Traffic Impact Assessment for Dragoon Gulch Trails Master Plan, Sonora, CA*.

Significance Thresholds

The following describes significance thresholds applied in this letter report.

Criteria Pollutant Emissions. Significance thresholds recommended by the Tuolumne County Air Pollution Control District (TCAPCD) are used in this letter report. The significance thresholds recommended by the TCAPCD state that a project is considered to have a significant impact on air quality if it would result in emissions in excess of the following:

- 1,000 pounds per day (ppd) or 100 tons per year (tpy) of reactive organic gases (ROG),

- 1,000 ppd or 100 tpy of nitrogen oxides (NO_x),
- 1,000 ppd or 100 tpy of inhalable particulate matter less than 10 micrometers in diameter (PM_{10}), or
- 1,000 ppd or 100 tpy of carbon monoxide (CO).

The thresholds listed above were applied to both short-term construction-related emissions and long-term operational emissions.

Greenhouse Gas Emissions. The significance threshold for GHG emissions used in this letter report is based on a threshold developed by the California Air Pollution Control Officers Association (CAPCOA). The CAPCOA document *CEQA & Climate Change – Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* presents a 900 metric ton per year (MT/yr) of CO_2e screening threshold.

The CAPCOA threshold is considered a conservative threshold set at a level to "capture" or define 90 percent of land use development projects as significant. The CAPCOA document notes,

> "A single quantitative threshold was developed in order to ensure capture of 90 percent or more of likely future discretionary developments. The objective was to set the emission threshold low enough to capture a substantial fraction of future residential and nonresidential development that will be constructed to accommodate future statewide population and job growth, while setting the emission threshold high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions."

In this letter report, if the Dragoon Gulch Trails Master Plan project would generate more than 900 MT/yr of CO_2e, the project is considered to have a significant impact on global climate change. If the project would generate 900 MT/yr of CO_2e or less, the project is considered to have a less-than-significant impact on global climate change.

The threshold described above was applied to both short-term construction-related emissions and long-term operational emissions.

Emissions Estimates

The following describes the results of the emissions modeling analysis and the significance of air quality impacts.

Construction-Related Criteria Pollutant Emissions. The enclosed **Table 1** shows estimates of criteria pollutant emissions associated with construction of the Dragoon Gulch Trails Master

KDA

Plan project. As shown in the table, project-related emissions would be below both the daily and annual significance thresholds. Therefore, the impact of the project on construction-related criteria pollutant emissions is considered less than significant. No mitigation measures are required.

Operational Criteria Pollutant Emissions. The enclosed **Table 2** shows estimates of criteria pollutant emissions associated with operation of the Dragoon Gulch Trails Master Plan project. As shown in the table, project-related emissions would be below both the daily and annual significance thresholds. Therefore, the impact of the project on operational criteria pollutant emissions is considered less than significant. No mitigation measures are required.

Greenhouse Gas Emissions. The enclosed **Table 3** shows estimates of GHG emissions associated with both construction and operation of the Dragoon Gulch Trails Master Plan project. As shown in the table, both construction-related and operational project emissions would be below the significance threshold. Therefore, the impact of the project on GHG emissions is considered less than significant. No mitigation measures are required.

Closing

Thank you for providing KDA with this opportunity to provide you with air quality emissions modeling services on the Dragoon Gulch Trails Master Plan project. Please let me know if you have any questions about this letter report.

Sincerely,

KD Anderson & Associates, Inc.

Wayne Shijo
Project Manager

enclosure

KDA

Table 1 - Construction-Related Criteria Pollutant Emissions

Construction Phase and Significance Factor	Reactive Organic Gas (ROG)	Carbon Monoxide (CO)	Nitrogen Oxides (NO_x)	Inhalable Particulate Matter (PM_{10})
Daily Emissions in Pounds per Day				
Parking Lot and Driveway	46.0	10.2	14.8	1.8
Brush Clearing	1.0	9.0	NDA	1.6
Trail Expansion	0.6	6.4	3.9	6.7
Total	47.6	25.6	18.7	10.0
Significance Threshold	1,000	1,000	1,000	1,000
Significant Impact?	No	No	No	No
Annual Emissions in Tons per Year				
Parking Lot and Driveway	0.20	0.55	0.79	0.06
Brush Clearing	0.01	0.10	NDA	0.02
Trail Expansion	0.03	0.25	0.22	0.14
Total	0.24	0.90	1.01	0.22
Significance Threshold	100	100	100	100
Significant Impact?	No	No	No	No

Source: CalEEMod Emissions Model, and U.S. Environmental Protection Agency AP-42.
Notes: Sum of values shown may not equal total due to rounding.
"NDA" = No data available in U.S. Environmental Protection Agency AP-42.

Table 2 - Operational Criteria Pollutant Emissions

Emissions Source and Significance Factor	Reactive Organic Gas (ROG)	Carbon Monoxide (CO)	Nitrogen Oxides (NO_x)	Inhalable Particulate Matter (PM_{10})
Daily Emissions in Pounds per Day				
Operational Emissions	2.55	17.04	3.24	1.19
Significance Threshold	1,000	1,000	1,000	1,000
Significant Impact?	No	No	No	No
Annual Emissions in Tons per Year				
Operational Emissions	0.44	2.83	0.55	0.21
Significance Threshold	100	100	100	100
Significant Impact?	No	No	No	No

Source: CalEEMod Emissions Model.

Table 3 - Greenhouse Gas Emissions

Construction Phase Emission Source and Significance Factor	Metric Tons of Carbon Dioxide Equivalent (CO_2e) Emissions per Year
Construction-Related Emissions	
Parking Lot and Driveway	66.51
Brush Clearing	15.69
Trail Expansion	27.95
Total	110.15
Significance Threshold	900
Significant Impact?	No
Operational Emissions	243.06
Significance Threshold	900
Significant Impact?	No

Source: CalEEMod Emissions Model.
Notes: Sum of values shown may not equal total due to rounding.

The following pages present output reports from the CalEEMod emissions model. Reports are presented for the following scenarios:

- Parking Lot and Driveway – Construction-Related Emissions – Annual Period
- Parking Lot and Driveway - Construction-Related Emissions – Summer Daily Period
- Parking Lot and Driveway - Construction-Related Emissions – Winter Daily Period
- Trail Expansion – Construction-Related and Operational Emissions – Annual Period
- Trail Expansion – Construction-Related and Operational Emissions – Summer Daily Period
- Trail Expansion – Construction-Related and Operational Emissions – Winter Daily Period

Parking Lot and Driveway Construction-Related Emissions Annual Period

Dragoon Gulch Recreation Area Parking Lot & Driveway

Tuolumne County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.60	1000sqft	0.22	9,600.00	0
Parking Lot	20.00	Space	0.18	8,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	66
Climate Zone	1			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This file is for construction only, and for only the parking lot and new driveway. This is not for operational emissions and not for trail construction.

Land Use - 20-space parking lot from the project description. Also from project description, 800 feet long x 12 feet wide = 9,600 sq. ft. for a new paved driveway.

Construction Phase - No demolition phase. All other data left at default.

Architectural Coating - Per project description, the only structure would be pre-manufactured. No on-site architectural coating.

Consumer Products - No consumer products.

Area Coating - No architectural coating.

Energy Use -

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	14760	0
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.2004	0.7947	0.5452	7.1000e-004	6.9000e-003	0.0540	0.0609	2.0200e-003	0.0497	0.0518	0.0000	66.1406	66.1406	0.0177	0.0000	66.5113
Total	**0.2004**	**0.7947**	**0.5452**	**7.1000e-004**	**6.9000e-003**	**0.0540**	**0.0609**	**2.0200e-003**	**0.0497**	**0.0518**	**0.0000**	**66.1406**	**66.1406**	**0.0177**	**0.0000**	**66.5113**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.2004	0.7947	0.5452	7.1000e-004	6.9000e-003	0.0540	0.0609	2.0200e-003	0.0497	0.0518	0.0000	66.1405	66.1405	0.0177	0.0000	66.5113
Total	**0.2004**	**0.7947**	**0.5452**	**7.1000e-004**	**6.9000e-003**	**0.0540**	**0.0609**	**2.0200e-003**	**0.0497**	**0.0518**	**0.0000**	**66.1405**	**66.1405**	**0.0177**	**0.0000**	**66.5113**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0716	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.3000e-004	5.3000e-004	0.0000	0.0000	5.6000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0480	2.0480	9.0000e-005	2.0000e-005	2.0559
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0716**	**0.0000**	**2.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0486**	**2.0486**	**9.0000e-005**	**2.0000e-005**	**2.0565**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0716	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.3000e-004	5.3000e-004	0.0000	0.0000	5.6000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0480	2.0480	9.0000e-005	2.0000e-005	2.0559
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0716**	**0.0000**	**2.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0486**	**2.0486**	**9.0000e-005**	**2.0000e-005**	**2.0565**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2015	1/1/2015	5	1	
2	Grading	Grading	1/2/2015	1/5/2015	5	2	
3	Building Construction	Building Construction	1/6/2015	5/25/2015	5	100	
4	Paving	Paving	5/26/2015	6/1/2015	5	5	
5	Architectural Coating	Architectural Coating	6/2/2015	6/8/2015	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 14,760; Non-Residential Outdoor: 4,920 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	7.1500e-003	3.7000e-003	0.0000		4.4000e-004	4.4000e-004		4.0000e-004	4.0000e-004	0.0000	0.4466	0.4466	1.3000e-004	0.0000	0.4494
Total	**7.1000e-004**	**7.1500e-003**	**3.7000e-003**	**0.0000**	**2.7000e-004**	**4.4000e-004**	**7.1000e-004**	**3.0000e-005**	**4.0000e-004**	**4.3000e-004**	**0.0000**	**0.4466**	**0.4466**	**1.3000e-004**	**0.0000**	**0.4494**

3.2 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0292	0.0292	0.0000	0.0000	0.0292
Total	**2.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0292**	**0.0292**	**0.0000**	**0.0000**	**0.0292**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	7.1500e-003	3.7000e-003	0.0000		4.4000e-004	4.4000e-004		4.0000e-004	4.0000e-004	0.0000	0.4466	0.4466	1.3000e-004	0.0000	0.4494
Total	**7.1000e-004**	**7.1500e-003**	**3.7000e-003**	**0.0000**	**2.7000e-004**	**4.4000e-004**	**7.1000e-004**	**3.0000e-005**	**4.0000e-004**	**4.3000e-004**	**0.0000**	**0.4466**	**0.4466**	**1.3000e-004**	**0.0000**	**0.4494**

3.2 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0292	0.0292	0.0000	0.0000	0.0292
Total	**2.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0292**	**0.0292**	**0.0000**	**0.0000**	**0.0292**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4100e-003	0.0119	8.8100e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.4000e-004	8.4000e-004	0.0000	1.0892	1.0892	2.2000e-004	0.0000	1.0939
Total	**1.4100e-003**	**0.0119**	**8.8100e-003**	**1.0000e-005**	**7.5000e-004**	**8.7000e-004**	**1.6200e-003**	**4.1000e-004**	**8.4000e-004**	**1.2500e-003**	**0.0000**	**1.0892**	**1.0892**	**2.2000e-004**	**0.0000**	**1.0939**

3.3 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.3000e-004	1.2600e-003	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1166	0.1166	1.0000e-005	0.0000	0.1168
Total	**9.0000e-005**	**1.3000e-004**	**1.2600e-003**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1166**	**0.1166**	**1.0000e-005**	**0.0000**	**0.1168**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4100e-003	0.0119	8.8100e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.4000e-004	8.4000e-004	0.0000	1.0892	1.0892	2.2000e-004	0.0000	1.0939
Total	**1.4100e-003**	**0.0119**	**8.8100e-003**	**1.0000e-005**	**7.5000e-004**	**8.7000e-004**	**1.6200e-003**	**4.1000e-004**	**8.4000e-004**	**1.2500e-003**	**0.0000**	**1.0892**	**1.0892**	**2.2000e-004**	**0.0000**	**1.0939**

3.3 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	1.3000e-004	1.2600e-003	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1166	0.1166	1.0000e-005	0.0000	0.1168
Total	**9.0000e-005**	**1.3000e-004**	**1.2600e-003**	**0.0000**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1166**	**0.1166**	**1.0000e-005**	**0.0000**	**0.1168**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0727	0.7189	0.4149	5.7000e-004		0.0500	0.0500		0.0460	0.0460	0.0000	54.0547	54.0547	0.0161	0.0000	54.3936
Total	**0.0727**	**0.7189**	**0.4149**	**5.7000e-004**		**0.0500**	**0.0500**		**0.0460**	**0.0460**	**0.0000**	**54.0547**	**54.0547**	**0.0161**	**0.0000**	**54.3936**

3.4 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.0159	0.0430	3.0000e-005	8.5000e-004	2.5000e-004	1.1000e-003	2.4000e-004	2.3000e-004	4.7000e-004	0.0000	2.6506	2.6506	3.0000e-005	0.0000	2.6511
Worker	3.1200e-003	4.6800e-003	0.0440	5.0000e-005	4.2900e-003	5.0000e-005	4.3400e-003	1.1400e-003	5.0000e-005	1.1900e-003	0.0000	4.0815	4.0815	3.2000e-004	0.0000	4.0882
Total	**6.4300e-003**	**0.0206**	**0.0871**	**8.0000e-005**	**5.1400e-003**	**3.0000e-004**	**5.4400e-003**	**1.3800e-003**	**2.8000e-004**	**1.6600e-003**	**0.0000**	**6.7320**	**6.7320**	**3.5000e-004**	**0.0000**	**6.7393**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0727	0.7189	0.4149	5.7000e-004		0.0500	0.0500		0.0460	0.0460	0.0000	54.0546	54.0546	0.0161	0.0000	54.3935
Total	**0.0727**	**0.7189**	**0.4149**	**5.7000e-004**		**0.0500**	**0.0500**		**0.0460**	**0.0460**	**0.0000**	**54.0546**	**54.0546**	**0.0161**	**0.0000**	**54.3935**

3.4 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.0159	0.0430	3.0000e-005	8.5000e-004	2.5000e-004	1.1000e-003	2.4000e-004	2.3000e-004	4.7000e-004	0.0000	2.6506	2.6506	3.0000e-005	0.0000	2.6511
Worker	3.1200e-003	4.6800e-003	0.0440	5.0000e-005	4.2900e-003	5.0000e-005	4.3400e-003	1.1400e-003	5.0000e-005	1.1900e-003	0.0000	4.0815	4.0815	3.2000e-004	0.0000	4.0882
Total	**6.4300e-003**	**0.0206**	**0.0871**	**8.0000e-005**	**5.1400e-003**	**3.0000e-004**	**5.4400e-003**	**1.3800e-003**	**2.8000e-004**	**1.6600e-003**	**0.0000**	**6.7320**	**6.7320**	**3.5000e-004**	**0.0000**	**6.7393**

3.5 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0200e-003	0.0289	0.0184	3.0000e-005		1.8100e-003	1.8100e-003		1.6800e-003	1.6800e-003	0.0000	2.4801	2.4801	6.7000e-004	0.0000	2.4943
Paving	5.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.5400e-003**	**0.0289**	**0.0184**	**3.0000e-005**		**1.8100e-003**	**1.8100e-003**		**1.6800e-003**	**1.6800e-003**	**0.0000**	**2.4801**	**2.4801**	**6.7000e-004**	**0.0000**	**2.4943**

3.5 Paving - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	6.0000e-004	5.6600e-003	1.0000e-005	5.5000e-004	1.0000e-005	5.6000e-004	1.5000e-004	1.0000e-005	1.5000e-004	0.0000	0.5248	0.5248	4.0000e-005	0.0000	0.5256
Total	**4.0000e-004**	**6.0000e-004**	**5.6600e-003**	**1.0000e-005**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**1.5000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**0.5248**	**0.5248**	**4.0000e-005**	**0.0000**	**0.5256**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0200e-003	0.0289	0.0184	3.0000e-005		1.8100e-003	1.8100e-003		1.6800e-003	1.6800e-003	0.0000	2.4801	2.4801	6.7000e-004	0.0000	2.4943
Paving	5.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.5400e-003**	**0.0289**	**0.0184**	**3.0000e-005**		**1.8100e-003**	**1.8100e-003**		**1.6800e-003**	**1.6800e-003**	**0.0000**	**2.4801**	**2.4801**	**6.7000e-004**	**0.0000**	**2.4943**

3.5 Paving - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-004	6.0000e-004	5.6600e-003	1.0000e-005	5.5000e-004	1.0000e-005	5.6000e-004	1.5000e-004	1.0000e-005	1.5000e-004	0.0000	0.5248	0.5248	4.0000e-005	0.0000	0.5256
Total	**4.0000e-004**	**6.0000e-004**	**5.6600e-003**	**1.0000e-005**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**1.5000e-004**	**1.0000e-005**	**1.5000e-004**	**0.0000**	**0.5248**	**0.5248**	**4.0000e-005**	**0.0000**	**0.5256**

3.6 Architectural Coating - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	6.4300e-003	4.7500e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	0.6383	0.6383	8.0000e-005	0.0000	0.6401
Total	**0.1150**	**6.4300e-003**	**4.7500e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**0.6383**	**0.6383**	**8.0000e-005**	**0.0000**	**0.6401**

3.6 Architectural Coating - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0292	0.0292	0.0000	0.0000	0.0292
Total	**2.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0292**	**0.0292**	**0.0000**	**0.0000**	**0.0292**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	6.4300e-003	4.7500e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	0.6383	0.6383	8.0000e-005	0.0000	0.6401
Total	**0.1150**	**6.4300e-003**	**4.7500e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**0.6383**	**0.6383**	**8.0000e-005**	**0.0000**	**0.6401**

3.6 Architectural Coating - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	3.0000e-005	3.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0292	0.0292	0.0000	0.0000	0.0292
Total	**2.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0292**	**0.0292**	**0.0000**	**0.0000**	**0.0292**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.380748	0.119245	0.176820	0.180714	0.091672	0.010142	0.015516	0.004111	0.002387	0.000898	0.009847	0.001341	0.006560

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.0480	2.0480	9.0000e-005	2.0000e-005	2.0559
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.0480	2.0480	9.0000e-005	2.0000e-005	2.0559
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7040	2.0480	9.0000e-005	2.0000e-005	2.0559
Total		**2.0480**	**9.0000e-005**	**2.0000e-005**	**2.0559**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7040	2.0480	9.0000e-005	2.0000e-005	2.0559
Total		**2.0480**	**9.0000e-005**	**2.0000e-005**	**2.0559**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0716	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.3000e-004	5.3000e-004	0.0000	0.0000	5.6000e-004
Unmitigated	0.0716	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.3000e-004	5.3000e-004	0.0000	0.0000	5.6000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0687					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.3000e-004	5.3000e-004	0.0000	0.0000	5.6000e-004
Total	**0.0716**	**0.0000**	**2.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.3000e-004**	**5.3000e-004**	**0.0000**	**0.0000**	**5.6000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0687					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.3000e-004	5.3000e-004	0.0000	0.0000	5.6000e-004
Total	**0.0716**	**0.0000**	**2.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.3000e-004**	**5.3000e-004**	**0.0000**	**0.0000**	**5.6000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Vegetation

Parking Lot and Driveway Construction-Related Emissions Summer Daily Period

Dragoon Gulch Recreation Area Parking Lot & Driveway

Tuolumne County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.60	1000sqft	0.22	9,600.00	0
Parking Lot	20.00	Space	0.18	8,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	66
Climate Zone	1			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This file is for construction only, and for only the parking lot and new driveway. This is not for operational emissions and not for trail construction.

Land Use - 20-space parking lot from the project description. Also from project description, 800 feet long x 12 feet wide = 9,600 sq. ft. for a new paved driveway.

Construction Phase - No demolition phase. All other data left at default.

Architectural Coating - Per project description, the only structure would be pre-manufactured. No on-site architectural coating.

Consumer Products - No consumer products.

Area Coating - No architectural coating.

Energy Use -

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	14760	0
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	46.0244	14.7547	10.1102	0.0141	0.8805	1.0054	1.7567	0.4477	0.9250	1.2848	0.0000	1,347.2503	1,347.2503	0.3635	0.0000	1,354.8828
Total	**46.0244**	**14.7547**	**10.1102**	**0.0141**	**0.8805**	**1.0054**	**1.7567**	**0.4477**	**0.9250**	**1.2848**	**0.0000**	**1,347.2503**	**1,347.2503**	**0.3635**	**0.0000**	**1,354.8828**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	46.0244	14.7547	10.1102	0.0141	0.8805	1.0054	1.7567	0.4477	0.9250	1.2848	0.0000	1,347.2503	1,347.2503	0.3635	0.0000	1,354.8828
Total	**46.0244**	**14.7547**	**10.1102**	**0.0141**	**0.8805**	**1.0054**	**1.7567**	**0.4477**	**0.9250**	**1.2848**	**0.0000**	**1,347.2503**	**1,347.2503**	**0.3635**	**0.0000**	**1,354.8828**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3926	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.3926**	**3.0000e-005**	**3.1300e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.4800e-003**	**6.4800e-003**	**2.0000e-005**	**0.0000**	**6.8700e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3926	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.3926**	**3.0000e-005**	**3.1300e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.4800e-003**	**6.4800e-003**	**2.0000e-005**	**0.0000**	**6.8700e-003**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2015	1/1/2015	5	1	
2	Grading	Grading	1/2/2015	1/5/2015	5	2	
3	Building Construction	Building Construction	1/6/2015	5/25/2015	5	100	
4	Paving	Paving	5/26/2015	6/1/2015	5	5	
5	Architectural Coating	Architectural Coating	6/2/2015	6/8/2015	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 14,760; Non-Residential Outdoor: 4,920 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.4222	14.2999	7.4063	9.3600e-003		0.8797	0.8797		0.8093	0.8093		984.5542	984.5542	0.2939		990.7267
Total	**1.4222**	**14.2999**	**7.4063**	**9.3600e-003**	**0.5303**	**0.8797**	**1.4100**	**0.0573**	**0.8093**	**0.8666**		**984.5542**	**984.5542**	**0.2939**		**990.7267**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0467	0.0555	0.6482	8.2000e-004	0.0639	7.1000e-004	0.0646	0.0169	6.4000e-004	0.0176		69.2028	69.2028	5.0900e-003		69.3097
Total	**0.0467**	**0.0555**	**0.6482**	**8.2000e-004**	**0.0639**	**7.1000e-004**	**0.0646**	**0.0169**	**6.4000e-004**	**0.0176**		**69.2028**	**69.2028**	**5.0900e-003**		**69.3097**

3.2 Site Preparation - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.4222	14.2999	7.4063	9.3600e-003		0.8797	0.8797		0.8093	0.8093	0.0000	984.5542	984.5542	0.2939		990.7267
Total	**1.4222**	**14.2999**	**7.4063**	**9.3600e-003**	**0.5303**	**0.8797**	**1.4100**	**0.0573**	**0.8093**	**0.8666**	**0.0000**	**984.5542**	**984.5542**	**0.2939**		**990.7267**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0467	0.0555	0.6482	8.2000e-004	0.0639	7.1000e-004	0.0646	0.0169	6.4000e-004	0.0176		69.2028	69.2028	5.0900e-003		69.3097
Total	**0.0467**	**0.0555**	**0.6482**	**8.2000e-004**	**0.0639**	**7.1000e-004**	**0.0646**	**0.0169**	**6.4000e-004**	**0.0176**		**69.2028**	**69.2028**	**5.0900e-003**		**69.3097**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.4120	11.9409	8.8138	0.0120		0.8748	0.8748		0.8359	0.8359		1,200.6386	1,200.6386	0.2451		1,205.7861
Total	**1.4120**	**11.9409**	**8.8138**	**0.0120**	**0.7528**	**0.8748**	**1.6276**	**0.4138**	**0.8359**	**1.2496**		**1,200.6386**	**1,200.6386**	**0.2451**		**1,205.7861**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0935	0.1110	1.2964	1.6400e-003	0.1277	1.4200e-003	0.1292	0.0339	1.2900e-003	0.0352		138.4055	138.4055	0.0102		138.6194
Total	**0.0935**	**0.1110**	**1.2964**	**1.6400e-003**	**0.1277**	**1.4200e-003**	**0.1292**	**0.0339**	**1.2900e-003**	**0.0352**		**138.4055**	**138.4055**	**0.0102**		**138.6194**

3.3 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.4120	11.9409	8.8138	0.0120		0.8748	0.8748		0.8359	0.8359	0.0000	1,200.6386	1,200.6386	0.2451		1,205.7861
Total	**1.4120**	**11.9409**	**8.8138**	**0.0120**	**0.7528**	**0.8748**	**1.6276**	**0.4138**	**0.8359**	**1.2496**	**0.0000**	**1,200.6386**	**1,200.6386**	**0.2451**		**1,205.7861**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0935	0.1110	1.2964	1.6400e-003	0.1277	1.4200e-003	0.1292	0.0339	1.2900e-003	0.0352		138.4055	138.4055	0.0102		138.6194
Total	**0.0935**	**0.1110**	**1.2964**	**1.6400e-003**	**0.1277**	**1.4200e-003**	**0.1292**	**0.0339**	**1.2900e-003**	**0.0352**		**138.4055**	**138.4055**	**0.0102**		**138.6194**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4538	14.3777	8.2983	0.0113		0.9995	0.9995		0.9195	0.9195		1,191.7021	1,191.7021	0.3558		1,199.1733
Total	**1.4538**	**14.3777**	**8.2983**	**0.0113**		**0.9995**	**0.9995**		**0.9195**	**0.9195**		**1,191.7021**	**1,191.7021**	**0.3558**		**1,199.1733**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0556	0.2994	0.6570	5.9000e-004	0.0176	4.9600e-003	0.0226	5.0100e-003	4.5600e-003	9.5700e-003		58.6643	58.6643	5.5000e-004		58.6759
Worker	0.0654	0.0777	0.9075	1.1500e-003	0.0894	9.9000e-004	0.0904	0.0237	9.0000e-004	0.0246		96.8839	96.8839	7.1300e-003		97.0336
Total	**0.1211**	**0.3770**	**1.5644**	**1.7400e-003**	**0.1070**	**5.9500e-003**	**0.1130**	**0.0287**	**5.4600e-003**	**0.0342**		**155.5482**	**155.5482**	**7.6800e-003**		**155.7095**

3.4 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4538	14.3777	8.2983	0.0113		0.9995	0.9995		0.9195	0.9195	0.0000	1,191.7021	1,191.7021	0.3558		1,199.1733
Total	**1.4538**	**14.3777**	**8.2983**	**0.0113**		**0.9995**	**0.9995**		**0.9195**	**0.9195**	**0.0000**	**1,191.7021**	**1,191.7021**	**0.3558**		**1,199.1733**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0556	0.2994	0.6570	5.9000e-004	0.0176	4.9600e-003	0.0226	5.0100e-003	4.5600e-003	9.5700e-003		58.6643	58.6643	5.5000e-004		58.6759
Worker	0.0654	0.0777	0.9075	1.1500e-003	0.0894	9.9000e-004	0.0904	0.0237	9.0000e-004	0.0246		96.8839	96.8839	7.1300e-003		97.0336
Total	**0.1211**	**0.3770**	**1.5644**	**1.7400e-003**	**0.1070**	**5.9500e-003**	**0.1130**	**0.0287**	**5.4600e-003**	**0.0342**		**155.5482**	**155.5482**	**7.6800e-003**		**155.7095**

3.5 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2092	11.5427	7.3586	0.0111		0.7247	0.7247		0.6703	0.6703		1,093.5433	1,093.5433	0.2970		1,099.7794
Paving	0.2096					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4188**	**11.5427**	**7.3586**	**0.0111**		**0.7247**	**0.7247**		**0.6703**	**0.6703**		**1,093.5433**	**1,093.5433**	**0.2970**		**1,099.7794**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1683	0.1998	2.3335	2.9500e-003	0.2299	2.5500e-003	0.2325	0.0610	2.3200e-003	0.0633		249.1299	249.1299	0.0183		249.5149
Total	**0.1683**	**0.1998**	**2.3335**	**2.9500e-003**	**0.2299**	**2.5500e-003**	**0.2325**	**0.0610**	**2.3200e-003**	**0.0633**		**249.1299**	**249.1299**	**0.0183**		**249.5149**

3.5 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2092	11.5427	7.3586	0.0111		0.7247	0.7247		0.6703	0.6703	0.0000	1,093.5433	1,093.5433	0.2970		1,099.7794
Paving	0.2096					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4188**	**11.5427**	**7.3586**	**0.0111**		**0.7247**	**0.7247**		**0.6703**	**0.6703**	**0.0000**	**1,093.5433**	**1,093.5433**	**0.2970**		**1,099.7794**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1683	0.1998	2.3335	2.9500e-003	0.2299	2.5500e-003	0.2325	0.0610	2.3200e-003	0.0633		249.1299	249.1299	0.0183		249.5149
Total	**0.1683**	**0.1998**	**2.3335**	**2.9500e-003**	**0.2299**	**2.5500e-003**	**0.2325**	**0.0610**	**2.3200e-003**	**0.0633**		**249.1299**	**249.1299**	**0.0183**		**249.5149**

3.6 Architectural Coating - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	45.6084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4066	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209		281.4481	281.4481	0.0367		282.2177
Total	**46.0150**	**2.5703**	**1.9018**	**2.9700e-003**		**0.2209**	**0.2209**		**0.2209**	**0.2209**		**281.4481**	**281.4481**	**0.0367**		**282.2177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.3500e-003	0.0111	0.1296	1.6000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		13.8406	13.8406	1.0200e-003		13.8619
Total	**9.3500e-003**	**0.0111**	**0.1296**	**1.6000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**13.8406**	**13.8406**	**1.0200e-003**		**13.8619**

3.6 Architectural Coating - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	45.6084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4066	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209	0.0000	281.4481	281.4481	0.0367		282.2177
Total	**46.0150**	**2.5703**	**1.9018**	**2.9700e-003**		**0.2209**	**0.2209**		**0.2209**	**0.2209**	**0.0000**	**281.4481**	**281.4481**	**0.0367**		**282.2177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.3500e-003	0.0111	0.1296	1.6000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		13.8406	13.8406	1.0200e-003		13.8619
Total	**9.3500e-003**	**0.0111**	**0.1296**	**1.6000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**13.8406**	**13.8406**	**1.0200e-003**		**13.8619**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.380748	0.119245	0.176820	0.180714	0.091672	0.010142	0.015516	0.004111	0.002387	0.000898	0.009847	0.001341	0.006560

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3926	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Unmitigated	0.3926	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Total	**0.3926**	**3.0000e-005**	**3.1300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.4800e-003**	**6.4800e-003**	**2.0000e-005**		**6.8700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Total	**0.3926**	**3.0000e-005**	**3.1300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.4800e-003**	**6.4800e-003**	**2.0000e-005**		**6.8700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Parking Lot and Driveway
Construction-Related Emissions
Winter Daily Period

Dragoon Gulch Recreation Area Parking Lot & Driveway

Tuolumne County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.60	1000sqft	0.22	9,600.00	0
Parking Lot	20.00	Space	0.18	8,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	66
Climate Zone	1			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This file is for construction only, and for only the parking lot and new driveway. This is not for operational emissions and not for trail construction.

Land Use - 20-space parking lot from the project description. Also from project description, 800 feet long x 12 feet wide = 9,600 sq. ft. for a new paved driveway.

Construction Phase - No demolition phase. All other data left at default.

Architectural Coating - Per project description, the only structure would be pre-manufactured. No on-site architectural coating.

Consumer Products - No consumer products.

Area Coating - No architectural coating.

Energy Use -

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Off-road Equipment - All values left at default.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	14760	0
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	46.0245	14.8044	10.2422	0.0138	0.8805	1.0056	1.7567	0.4477	0.9251	1.2848	0.0000	1,338.2976	1,338.2976	0.3635	0.0000	1,345.9305
Total	**46.0245**	**14.8044**	**10.2422**	**0.0138**	**0.8805**	**1.0056**	**1.7567**	**0.4477**	**0.9251**	**1.2848**	**0.0000**	**1,338.2976**	**1,338.2976**	**0.3635**	**0.0000**	**1,345.9305**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	46.0245	14.8044	10.2422	0.0138	0.8805	1.0056	1.7567	0.4477	0.9251	1.2848	0.0000	1,338.2976	1,338.2976	0.3635	0.0000	1,345.9305
Total	**46.0245**	**14.8044**	**10.2422**	**0.0138**	**0.8805**	**1.0056**	**1.7567**	**0.4477**	**0.9251**	**1.2848**	**0.0000**	**1,338.2976**	**1,338.2976**	**0.3635**	**0.0000**	**1,345.9305**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3926	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.3926**	**3.0000e-005**	**3.1300e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.4800e-003**	**6.4800e-003**	**2.0000e-005**	**0.0000**	**6.8700e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3926	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.3926**	**3.0000e-005**	**3.1300e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.4800e-003**	**6.4800e-003**	**2.0000e-005**	**0.0000**	**6.8700e-003**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2015	1/1/2015	5	1	
2	Grading	Grading	1/2/2015	1/5/2015	5	2	
3	Building Construction	Building Construction	1/6/2015	5/25/2015	5	100	
4	Paving	Paving	5/26/2015	6/1/2015	5	5	
5	Architectural Coating	Architectural Coating	6/2/2015	6/8/2015	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 14,760; Non-Residential Outdoor: 4,920 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.4222	14.2999	7.4063	9.3600e-003		0.8797	0.8797		0.8093	0.8093		984.5542	984.5542	0.2939		990.7267
Total	**1.4222**	**14.2999**	**7.4063**	**9.3600e-003**	**0.5303**	**0.8797**	**1.4100**	**0.0573**	**0.8093**	**0.8666**		**984.5542**	**984.5542**	**0.2939**		**990.7267**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0733	0.6578	7.5000e-004	0.0639	7.1000e-004	0.0646	0.0169	6.4000e-004	0.0176		63.1987	63.1987	5.0900e-003		63.3057
Total	**0.0477**	**0.0733**	**0.6578**	**7.5000e-004**	**0.0639**	**7.1000e-004**	**0.0646**	**0.0169**	**6.4000e-004**	**0.0176**		**63.1987**	**63.1987**	**5.0900e-003**		**63.3057**

3.2 Site Preparation - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.4222	14.2999	7.4063	9.3600e-003		0.8797	0.8797		0.8093	0.8093	0.0000	984.5542	984.5542	0.2939		990.7267
Total	**1.4222**	**14.2999**	**7.4063**	**9.3600e-003**	**0.5303**	**0.8797**	**1.4100**	**0.0573**	**0.8093**	**0.8666**	**0.0000**	**984.5542**	**984.5542**	**0.2939**		**990.7267**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0477	0.0733	0.6578	7.5000e-004	0.0639	7.1000e-004	0.0646	0.0169	6.4000e-004	0.0176		63.1987	63.1987	5.0900e-003		63.3057
Total	**0.0477**	**0.0733**	**0.6578**	**7.5000e-004**	**0.0639**	**7.1000e-004**	**0.0646**	**0.0169**	**6.4000e-004**	**0.0176**		**63.1987**	**63.1987**	**5.0900e-003**		**63.3057**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.4120	11.9409	8.8138	0.0120		0.8748	0.8748		0.8359	0.8359		1,200.6386	1,200.6386	0.2451		1,205.7861
Total	**1.4120**	**11.9409**	**8.8138**	**0.0120**	**0.7528**	**0.8748**	**1.6276**	**0.4138**	**0.8359**	**1.2496**		**1,200.6386**	**1,200.6386**	**0.2451**		**1,205.7861**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0953	0.1465	1.3155	1.5000e-003	0.1277	1.4200e-003	0.1292	0.0339	1.2900e-003	0.0352		126.3975	126.3975	0.0102		126.6114
Total	**0.0953**	**0.1465**	**1.3155**	**1.5000e-003**	**0.1277**	**1.4200e-003**	**0.1292**	**0.0339**	**1.2900e-003**	**0.0352**		**126.3975**	**126.3975**	**0.0102**		**126.6114**

3.3 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.4120	11.9409	8.8138	0.0120		0.8748	0.8748		0.8359	0.8359	0.0000	1,200.6386	1,200.6386	0.2451		1,205.7861
Total	**1.4120**	**11.9409**	**8.8138**	**0.0120**	**0.7528**	**0.8748**	**1.6276**	**0.4138**	**0.8359**	**1.2496**	**0.0000**	**1,200.6386**	**1,200.6386**	**0.2451**		**1,205.7861**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0953	0.1465	1.3155	1.5000e-003	0.1277	1.4200e-003	0.1292	0.0339	1.2900e-003	0.0352		126.3975	126.3975	0.0102		126.6114
Total	**0.0953**	**0.1465**	**1.3155**	**1.5000e-003**	**0.1277**	**1.4200e-003**	**0.1292**	**0.0339**	**1.2900e-003**	**0.0352**		**126.3975**	**126.3975**	**0.0102**		**126.6114**

3.4 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4538	14.3777	8.2983	0.0113		0.9995	0.9995		0.9195	0.9195		1,191.7021	1,191.7021	0.3558		1,199.1733
Total	**1.4538**	**14.3777**	**8.2983**	**0.0113**		**0.9995**	**0.9995**		**0.9195**	**0.9195**		**1,191.7021**	**1,191.7021**	**0.3558**		**1,199.1733**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0762	0.3242	1.0231	5.9000e-004	0.0176	5.0600e-003	0.0227	5.0100e-003	4.6500e-003	9.6600e-003		58.1173	58.1173	5.7000e-004		58.1292
Worker	0.0667	0.1026	0.9209	1.0500e-003	0.0894	9.9000e-004	0.0904	0.0237	9.0000e-004	0.0246		88.4782	88.4782	7.1300e-003		88.6280
Total	**0.1429**	**0.4267**	**1.9440**	**1.6400e-003**	**0.1070**	**6.0500e-003**	**0.1131**	**0.0287**	**5.5500e-003**	**0.0343**		**146.5955**	**146.5955**	**7.7000e-003**		**146.7571**

3.4 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4538	14.3777	8.2983	0.0113		0.9995	0.9995		0.9195	0.9195	0.0000	1,191.7021	1,191.7021	0.3558		1,199.1733
Total	**1.4538**	**14.3777**	**8.2983**	**0.0113**		**0.9995**	**0.9995**		**0.9195**	**0.9195**	**0.0000**	**1,191.7021**	**1,191.7021**	**0.3558**		**1,199.1733**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0762	0.3242	1.0231	5.9000e-004	0.0176	5.0600e-003	0.0227	5.0100e-003	4.6500e-003	9.6600e-003		58.1173	58.1173	5.7000e-004		58.1292
Worker	0.0667	0.1026	0.9209	1.0500e-003	0.0894	9.9000e-004	0.0904	0.0237	9.0000e-004	0.0246		88.4782	88.4782	7.1300e-003		88.6280
Total	**0.1429**	**0.4267**	**1.9440**	**1.6400e-003**	**0.1070**	**6.0500e-003**	**0.1131**	**0.0287**	**5.5500e-003**	**0.0343**		**146.5955**	**146.5955**	**7.7000e-003**		**146.7571**

3.5 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2092	11.5427	7.3586	0.0111		0.7247	0.7247		0.6703	0.6703		1,093.5433	1,093.5433	0.2970		1,099.7794
Paving	0.2096					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4188**	**11.5427**	**7.3586**	**0.0111**		**0.7247**	**0.7247**		**0.6703**	**0.6703**		**1,093.5433**	**1,093.5433**	**0.2970**		**1,099.7794**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1716	0.2637	2.3679	2.7000e-003	0.2299	2.5500e-003	0.2325	0.0610	2.3200e-003	0.0633		227.5154	227.5154	0.0183		227.9005
Total	**0.1716**	**0.2637**	**2.3679**	**2.7000e-003**	**0.2299**	**2.5500e-003**	**0.2325**	**0.0610**	**2.3200e-003**	**0.0633**		**227.5154**	**227.5154**	**0.0183**		**227.9005**

3.5 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2092	11.5427	7.3586	0.0111		0.7247	0.7247		0.6703	0.6703	0.0000	1,093.5433	1,093.5433	0.2970		1,099.7794
Paving	0.2096					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4188**	**11.5427**	**7.3586**	**0.0111**		**0.7247**	**0.7247**		**0.6703**	**0.6703**	**0.0000**	**1,093.5433**	**1,093.5433**	**0.2970**		**1,099.7794**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1716	0.2637	2.3679	2.7000e-003	0.2299	2.5500e-003	0.2325	0.0610	2.3200e-003	0.0633		227.5154	227.5154	0.0183		227.9005
Total	**0.1716**	**0.2637**	**2.3679**	**2.7000e-003**	**0.2299**	**2.5500e-003**	**0.2325**	**0.0610**	**2.3200e-003**	**0.0633**		**227.5154**	**227.5154**	**0.0183**		**227.9005**

3.6 Architectural Coating - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	45.6084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4066	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209		281.4481	281.4481	0.0367		282.2177
Total	**46.0150**	**2.5703**	**1.9018**	**2.9700e-003**		**0.2209**	**0.2209**		**0.2209**	**0.2209**		**281.4481**	**281.4481**	**0.0367**		**282.2177**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.5300e-003	0.0147	0.1316	1.5000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.6398	12.6398	1.0200e-003		12.6611
Total	**9.5300e-003**	**0.0147**	**0.1316**	**1.5000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.6398**	**12.6398**	**1.0200e-003**		**12.6611**

3.6 Architectural Coating - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	45.6084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4066	2.5703	1.9018	2.9700e-003		0.2209	0.2209		0.2209	0.2209	0.0000	281.4481	281.4481	0.0367		282.2177
Total	**46.0150**	**2.5703**	**1.9018**	**2.9700e-003**		**0.2209**	**0.2209**		**0.2209**	**0.2209**	**0.0000**	**281.4481**	**281.4481**	**0.0367**		**282.2177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.5300e-003	0.0147	0.1316	1.5000e-004	0.0128	1.4000e-004	0.0129	3.3900e-003	1.3000e-004	3.5200e-003		12.6398	12.6398	1.0200e-003		12.6611
Total	**9.5300e-003**	**0.0147**	**0.1316**	**1.5000e-004**	**0.0128**	**1.4000e-004**	**0.0129**	**3.3900e-003**	**1.3000e-004**	**3.5200e-003**		**12.6398**	**12.6398**	**1.0200e-003**		**12.6611**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.380748	0.119245	0.176820	0.180714	0.091672	0.010142	0.015516	0.004111	0.002387	0.000898	0.009847	0.001341	0.006560

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3926	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Unmitigated	0.3926	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Total	**0.3926**	**3.0000e-005**	**3.1300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.4800e-003**	**6.4800e-003**	**2.0000e-005**		**6.8700e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1000e-004	3.0000e-005	3.1300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.4800e-003	6.4800e-003	2.0000e-005		6.8700e-003
Total	**0.3926**	**3.0000e-005**	**3.1300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.4800e-003**	**6.4800e-003**	**2.0000e-005**		**6.8700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Trail Expansion
Construction-Related and Operational Emissions
Annual Period

Dragoon Gulch Recreation Area Trail Expansion

Tuolumne County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.73	Acre	0.73	31,798.80	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	66
Climate Zone	1			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This file is for construction and operation of the trail expansion portion of the Dragoon Gulch project. For construction, this file shows emissions for Year 1 of a five-year construction period.

Land Use - 7.5 miles of trail with an average soil disturbance width of 4 feet results in 3.64 acres, which would be 0.73 acres per year averaged over a five-year construction period.

Construction Phase - No Demol, Bldg Constr, Paving, or Arch Coat phases with trail construction - deleted. One month clearing (Site Prep) and six months constr trails (Grading) per project description.

Off-road Equipment - Equipment set per project description. No Concrete/Industrial Saws used. Horsepower for 4-foot trail dozer from SWECO.

Off-road Equipment - Equipment set per project description. No Graders used. Horsepower for 4-foot trail dozer from SWECO.

Trips and VMT - Per project description, 15-person crew (30 trips) for clearing (Site Preparation), 3 to 4-person crew (8 trips) for trail construction (Grading).

Grading - Total Acres Disturbed left at values calculated by CalEEMod: 0.5 for Site Preparation and 0 for Grading.

Architectural Coating - Per project description, the only structure would be pre-manufactured. No on-site architectural coating.

Vehicle Trips - 221 weekday and 214 weekend trips per day based on traffic study. Divided by 0.73 acres constructed per year, the effective rate per acre is 302.73 weekdays and 293.15 weekends.

Consumer Products - No consumer products.

Area Coating - No architectural coating. Square footage set to 0.

Landscape Equipment - No landscaping during long-term operation.

Energy Use -

Water And Wastewater - No water use. Outdoor water use set to zero.

Solid Waste - Solid waste generation set to 0.

Land Use Change - 7.5 miles of trail and 4 foot average width. For CO2e due to clearing of brush.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	47698	0
tblConstructionPhase	NumDays	2.00	131.00
tblConstructionPhase	NumDays	1.00	22.00
tblGrading	AcresOfGrading	0.00	0.50
tblLandUseChange	CO2peracre	14.30	4.31
tblOffRoadEquipment	HorsePower	255.00	109.00
tblOffRoadEquipment	HorsePower	255.00	109.00
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.06	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblVehicleTrips	ST_TR	1.59	293.15
tblVehicleTrips	SU_TR	1.59	293.15
tblVehicleTrips	WD_TR	1.59	302.73
tblWater	OutdoorWaterUseRate	869,781.39	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.0293	0.2178	0.2532	3.2000e-004	0.1263	0.0163	0.1426	0.0663	0.0150	0.0813	0.0000	27.8214	27.8214	6.1200e-003	0.0000	27.9499
Total	**0.0293**	**0.2178**	**0.2532**	**3.2000e-004**	**0.1263**	**0.0163**	**0.1426**	**0.0663**	**0.0150**	**0.0813**	**0.0000**	**27.8214**	**27.8214**	**6.1200e-003**	**0.0000**	**27.9499**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.0293	0.2178	0.2532	3.2000e-004	0.1263	0.0163	0.1426	0.0663	0.0150	0.0813	0.0000	27.8214	27.8214	6.1200e-003	0.0000	27.9499
Total	**0.0293**	**0.2178**	**0.2532**	**3.2000e-004**	**0.1263**	**0.0163**	**0.1426**	**0.0663**	**0.0150**	**0.0813**	**0.0000**	**27.8214**	**27.8214**	**6.1200e-003**	**0.0000**	**27.9499**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1334	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3049	0.5522	2.8333	3.0100e-003	0.2004	5.7900e-003	0.2062	0.0538	5.3100e-003	0.0591	0.0000	242.6806	242.6806	0.0180	0.0000	243.0589
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.4383**	**0.5522**	**2.8333**	**3.0100e-003**	**0.2004**	**5.7900e-003**	**0.2062**	**0.0538**	**5.3100e-003**	**0.0591**	**0.0000**	**242.6806**	**242.6806**	**0.0180**	**0.0000**	**243.0589**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1334	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3049	0.5522	2.8333	3.0100e-003	0.2004	5.7900e-003	0.2062	0.0538	5.3100e-003	0.0591	0.0000	242.6806	242.6806	0.0180	0.0000	243.0589
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.4383**	**0.5522**	**2.8333**	**3.0100e-003**	**0.2004**	**5.7900e-003**	**0.2062**	**0.0538**	**5.3100e-003**	**0.0591**	**0.0000**	**242.6806**	**242.6806**	**0.0180**	**0.0000**	**243.0589**

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

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	15.6884
Total	**15.6884**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2015	3/31/2015	5	22	
2	Grading	Grading	4/1/2015	9/30/2015	5	131	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	0	0.00	81	0.73
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	0	0.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	8.00	109	0.40
Grading	Rubber Tired Dozers	1	1.00	109	0.40
Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	30.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0665	0.0000	0.0665	0.0364	0.0000	0.0364	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9600e-003	0.0378	0.0267	3.0000e-005		2.9600e-003	2.9600e-003		2.7200e-003	2.7200e-003	0.0000	3.2680	3.2680	9.8000e-004	0.0000	3.2885
Total	**3.9600e-003**	**0.0378**	**0.0267**	**3.0000e-005**	**0.0665**	**2.9600e-003**	**0.0695**	**0.0364**	**2.7200e-003**	**0.0392**	**0.0000**	**3.2680**	**3.2680**	**9.8000e-004**	**0.0000**	**3.2885**

3.2 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9400e-003	4.4100e-003	0.0415	5.0000e-005	4.0500e-003	5.0000e-005	4.1000e-003	1.0800e-003	4.0000e-005	1.1200e-003	0.0000	3.8482	3.8482	3.0000e-004	0.0000	3.8546
Total	**2.9400e-003**	**4.4100e-003**	**0.0415**	**5.0000e-005**	**4.0500e-003**	**5.0000e-005**	**4.1000e-003**	**1.0800e-003**	**4.0000e-005**	**1.1200e-003**	**0.0000**	**3.8482**	**3.8482**	**3.0000e-004**	**0.0000**	**3.8546**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0665	0.0000	0.0665	0.0364	0.0000	0.0364	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9600e-003	0.0378	0.0267	3.0000e-005		2.9600e-003	2.9600e-003		2.7200e-003	2.7200e-003	0.0000	3.2680	3.2680	9.8000e-004	0.0000	3.2885
Total	**3.9600e-003**	**0.0378**	**0.0267**	**3.0000e-005**	**0.0665**	**2.9600e-003**	**0.0695**	**0.0364**	**2.7200e-003**	**0.0392**	**0.0000**	**3.2680**	**3.2680**	**9.8000e-004**	**0.0000**	**3.2885**

3.2 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9400e-003	4.4100e-003	0.0415	5.0000e-005	4.0500e-003	5.0000e-005	4.1000e-003	1.0800e-003	4.0000e-005	1.1200e-003	0.0000	3.8482	3.8482	3.0000e-004	0.0000	3.8546
Total	**2.9400e-003**	**4.4100e-003**	**0.0415**	**5.0000e-005**	**4.0500e-003**	**5.0000e-005**	**4.1000e-003**	**1.0800e-003**	**4.0000e-005**	**1.1200e-003**	**0.0000**	**3.8482**	**3.8482**	**3.0000e-004**	**0.0000**	**3.8546**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0493	0.0000	0.0493	0.0271	0.0000	0.0271	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0177	0.1686	0.1192	1.5000e-004		0.0132	0.0132		0.0121	0.0121	0.0000	14.5946	14.5946	4.3600e-003	0.0000	14.6861
Total	**0.0177**	**0.1686**	**0.1192**	**1.5000e-004**	**0.0493**	**0.0132**	**0.0625**	**0.0271**	**0.0121**	**0.0392**	**0.0000**	**14.5946**	**14.5946**	**4.3600e-003**	**0.0000**	**14.6861**

3.3 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6600e-003	7.0000e-003	0.0659	8.0000e-005	6.4300e-003	7.0000e-005	6.5000e-003	1.7100e-003	7.0000e-005	1.7800e-003	0.0000	6.1105	6.1105	4.8000e-004	0.0000	6.1207
Total	**4.6600e-003**	**7.0000e-003**	**0.0659**	**8.0000e-005**	**6.4300e-003**	**7.0000e-005**	**6.5000e-003**	**1.7100e-003**	**7.0000e-005**	**1.7800e-003**	**0.0000**	**6.1105**	**6.1105**	**4.8000e-004**	**0.0000**	**6.1207**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0493	0.0000	0.0493	0.0271	0.0000	0.0271	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0177	0.1686	0.1192	1.5000e-004		0.0132	0.0132		0.0121	0.0121	0.0000	14.5946	14.5946	4.3600e-003	0.0000	14.6861
Total	**0.0177**	**0.1686**	**0.1192**	**1.5000e-004**	**0.0493**	**0.0132**	**0.0625**	**0.0271**	**0.0121**	**0.0392**	**0.0000**	**14.5946**	**14.5946**	**4.3600e-003**	**0.0000**	**14.6861**

3.3 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6600e-003	7.0000e-003	0.0659	8.0000e-005	6.4300e-003	7.0000e-005	6.5000e-003	1.7100e-003	7.0000e-005	1.7800e-003	0.0000	6.1105	6.1105	4.8000e-004	0.0000	6.1207
Total	**4.6600e-003**	**7.0000e-003**	**0.0659**	**8.0000e-005**	**6.4300e-003**	**7.0000e-005**	**6.5000e-003**	**1.7100e-003**	**7.0000e-005**	**1.7800e-003**	**0.0000**	**6.1105**	**6.1105**	**4.8000e-004**	**0.0000**	**6.1207**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3049	0.5522	2.8333	3.0100e-003	0.2004	5.7900e-003	0.2062	0.0538	5.3100e-003	0.0591	0.0000	242.6806	242.6806	0.0180	0.0000	243.0589
Unmitigated	0.3049	0.5522	2.8333	3.0100e-003	0.2004	5.7900e-003	0.2062	0.0538	5.3100e-003	0.0591	0.0000	242.6806	242.6806	0.0180	0.0000	243.0589

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	220.99	214.00	214.00	540,086	540,086
Total	220.99	214.00	214.00	540,086	540,086

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.380748	0.119245	0.176820	0.180714	0.091672	0.010142	0.015516	0.004111	0.002387	0.000898	0.009847	0.001341	0.006560

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1334	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Unmitigated	0.1334	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.2100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**0.1334**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.2100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**0.1334**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	15.6884	0.0000	0.0000	15.6884

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Scrub	0 / 3.64	15.6884	0.0000	0.0000	15.6884
Total		**15.6884**	**0.0000**	**0.0000**	**15.6884**

Trail Expansion
Construction-Related and Operational Emissions
Summer Daily Period

Dragoon Gulch Recreation Area Trail Expansion

Tuolumne County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.73	Acre	0.73	31,798.80	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	66
Climate Zone	1			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This file is for construction and operation of the trail expansion portion of the Dragoon Gulch project. For construction, this file shows emissions for Year 1 of a five-year construction period.

Land Use - 7.5 miles of trail with an average soil disturbance width of 4 feet results in 3.64 acres, which would be 0.73 acres per year averaged over a five-year construction period.

Construction Phase - No Demol, Bldg Constr, Paving, or Arch Coat phases with trail construction - deleted. One month clearing (Site Prep) and six months constr trails (Grading) per project description.

Off-road Equipment - Equipment set per project description. No Concrete/Industrial Saws used. Horsepower for 4-foot trail dozer from SWECO.

Off-road Equipment - Equipment set per project description. No Graders used. Horsepower for 4-foot trail dozer from SWECO.

Trips and VMT - Per project description, 15-person crew (30 trips) for clearing (Site Preparation), 3 to 4-person crew (8 trips) for trail construction (Grading).

Grading - Total Acres Disturbed left at values calculated by CalEEMod: 0.5 for Site Preparation and 0 for Grading.

Architectural Coating - Per project description, the only structure would be pre-manufactured. No on-site architectural coating.

Vehicle Trips - 221 weekday and 214 weekend trips per day based on traffic study. Divided by 0.73 acres constructed per year, the effective rate per acre is 302.73 weekdays and 293.15 weekends.

Consumer Products - No consumer products.

Area Coating - No architectural coating. Square footage set to 0.

Landscape Equipment - No landscaping during long-term operation.

Energy Use -

Water And Wastewater - No water use. Outdoor water use set to zero.

Solid Waste - Solid waste generation set to 0.

Land Use Change - 7.5 miles of trail and 4 foot average width. For CO2e due to clearing of brush.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	47698	0
tblConstructionPhase	NumDays	2.00	131.00
tblConstructionPhase	NumDays	1.00	22.00
tblGrading	AcresOfGrading	0.00	0.50
tblLandUseChange	CO2peracre	14.30	4.31
tblOffRoadEquipment	HorsePower	255.00	109.00
tblOffRoadEquipment	HorsePower	255.00	109.00
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.06	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblVehicleTrips	ST_TR	1.59	293.15
tblVehicleTrips	SU_TR	1.59	293.15
tblVehicleTrips	WD_TR	1.59	302.73
tblWater	OutdoorWaterUseRate	869,781.39	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	0.6408	3.7651	6.3147	8.0300e-003	6.4294	0.2729	6.7023	3.4145	0.2510	3.6655	0.0000	742.7042	742.7042	0.1283	0.0000	745.3990
Total	**0.6408**	**3.7651**	**6.3147**	**8.0300e-003**	**6.4294**	**0.2729**	**6.7023**	**3.4145**	**0.2510**	**3.6655**	**0.0000**	**742.7042**	**742.7042**	**0.1283**	**0.0000**	**745.3990**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	0.6408	3.7651	6.3147	8.0300e-003	6.4294	0.2729	6.7023	3.4145	0.2510	3.6655	0.0000	742.7042	742.7042	0.1283	0.0000	745.3990
Total	**0.6408**	**3.7651**	**6.3147**	**8.0300e-003**	**6.4294**	**0.2729**	**6.7023**	**3.4145**	**0.2510**	**3.6655**	**0.0000**	**742.7042**	**742.7042**	**0.1283**	**0.0000**	**745.3990**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7310	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.7437	2.7255	14.8561	0.0177	1.1557	0.0321	1.1878	0.3091	0.0294	0.3385		1,569.6278	1,569.6278	0.1102		1,571.9425
Total	**2.4747**	**2.7255**	**14.8562**	**0.0177**	**1.1557**	**0.0321**	**1.1878**	**0.3091**	**0.0294**	**0.3385**		**1,569.6280**	**1,569.6280**	**0.1102**	**0.0000**	**1,571.9427**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7310	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.7437	2.7255	14.8561	0.0177	1.1557	0.0321	1.1878	0.3091	0.0294	0.3385		1,569.6278	1,569.6278	0.1102		1,571.9425
Total	**2.4747**	**2.7255**	**14.8562**	**0.0177**	**1.1557**	**0.0321**	**1.1878**	**0.3091**	**0.0294**	**0.3385**		**1,569.6280**	**1,569.6280**	**0.1102**	**0.0000**	**1,571.9427**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2015	3/31/2015	5	22	
2	Grading	Grading	4/1/2015	9/30/2015	5	131	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	0	0.00	81	0.73
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	0	0.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	8.00	109	0.40
Grading	Rubber Tired Dozers	1	1.00	109	0.40
Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	30.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0462	0.0000	6.0462	3.3128	0.0000	3.3128			0.0000			0.0000
Off-Road	0.3604	3.4321	2.4256	3.1200e-003		0.2686	0.2686		0.2472	0.2472		327.4877	327.4877	0.0978		329.5408
Total	**0.3604**	**3.4321**	**2.4256**	**3.1200e-003**	**6.0462**	**0.2686**	**6.3148**	**3.3128**	**0.2472**	**3.5600**		**327.4877**	**327.4877**	**0.0978**		**329.5408**

3.2 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2805	0.3329	3.8891	4.9200e-003	0.3832	4.2500e-003	0.3874	0.1016	3.8600e-003	0.1055		415.2165	415.2165	0.0306		415.8582
Total	**0.2805**	**0.3329**	**3.8891**	**4.9200e-003**	**0.3832**	**4.2500e-003**	**0.3874**	**0.1016**	**3.8600e-003**	**0.1055**		**415.2165**	**415.2165**	**0.0306**		**415.8582**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0462	0.0000	6.0462	3.3128	0.0000	3.3128			0.0000			0.0000
Off-Road	0.3604	3.4321	2.4256	3.1200e-003		0.2686	0.2686		0.2472	0.2472	0.0000	327.4877	327.4877	0.0978		329.5408
Total	**0.3604**	**3.4321**	**2.4256**	**3.1200e-003**	**6.0462**	**0.2686**	**6.3148**	**3.3128**	**0.2472**	**3.5600**	**0.0000**	**327.4877**	**327.4877**	**0.0978**		**329.5408**

3.2 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2805	0.3329	3.8891	4.9200e-003	0.3832	4.2500e-003	0.3874	0.1016	3.8600e-003	0.1055		415.2165	415.2165	0.0306		415.8582
Total	**0.2805**	**0.3329**	**3.8891**	**4.9200e-003**	**0.3832**	**4.2500e-003**	**0.3874**	**0.1016**	**3.8600e-003**	**0.1055**		**415.2165**	**415.2165**	**0.0306**		**415.8582**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.2703	2.5741	1.8192	2.3400e-003		0.2015	0.2015		0.1854	0.1854		245.6157	245.6157	0.0733		247.1556
Total	**0.2703**	**2.5741**	**1.8192**	**2.3400e-003**	**0.7528**	**0.2015**	**0.9542**	**0.4138**	**0.1854**	**0.5991**		**245.6157**	**245.6157**	**0.0733**		**247.1556**

3.3 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0748	0.0888	1.0371	1.3100e-003	0.1022	1.1300e-003	0.1033	0.0271	1.0300e-003	0.0281		110.7244	110.7244	8.1500e-003		110.8955
Total	**0.0748**	**0.0888**	**1.0371**	**1.3100e-003**	**0.1022**	**1.1300e-003**	**0.1033**	**0.0271**	**1.0300e-003**	**0.0281**		**110.7244**	**110.7244**	**8.1500e-003**		**110.8955**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.2703	2.5741	1.8192	2.3400e-003		0.2015	0.2015		0.1854	0.1854	0.0000	245.6157	245.6157	0.0733		247.1556
Total	**0.2703**	**2.5741**	**1.8192**	**2.3400e-003**	**0.7528**	**0.2015**	**0.9542**	**0.4138**	**0.1854**	**0.5991**	**0.0000**	**245.6157**	**245.6157**	**0.0733**		**247.1556**

3.3 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0748	0.0888	1.0371	1.3100e-003	0.1022	1.1300e-003	0.1033	0.0271	1.0300e-003	0.0281		110.7244	110.7244	8.1500e-003		110.8955
Total	**0.0748**	**0.0888**	**1.0371**	**1.3100e-003**	**0.1022**	**1.1300e-003**	**0.1033**	**0.0271**	**1.0300e-003**	**0.0281**		**110.7244**	**110.7244**	**8.1500e-003**		**110.8955**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7437	2.7255	14.8561	0.0177	1.1557	0.0321	1.1878	0.3091	0.0294	0.3385		1,569.6278	1,569.6278	0.1102		1,571.9425
Unmitigated	1.7437	2.7255	14.8561	0.0177	1.1557	0.0321	1.1878	0.3091	0.0294	0.3385		1,569.6278	1,569.6278	0.1102		1,571.9425

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	220.99	214.00	214.00	540,086	540,086
Total	220.99	214.00	214.00	540,086	540,086

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.380748	0.119245	0.176820	0.180714	0.091672	0.010142	0.015516	0.004111	0.002387	0.000898	0.009847	0.001341	0.006560

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7310	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Unmitigated	0.7310	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6805					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Total	**0.7310**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**		**1.7000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6805					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Total	**0.7310**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**		**1.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Trail Expansion
Construction-Related and Operational Emissions
Winter Daily Period

Dragoon Gulch Recreation Area Trail Expansion

Tuolumne County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.73	Acre	0.73	31,798.80	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	66
Climate Zone	1			**Operational Year**	2015
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This file is for construction and operation of the trail expansion portion of the Dragoon Gulch project. For construction, this file shows emissions for Year 1 of a five-year construction period.

Land Use - 7.5 miles of trail with an average soil disturbance width of 4 feet results in 3.64 acres, which would be 0.73 acres per year averaged over a five-year construction period.

Construction Phase - No Demol, Bldg Constr, Paving, or Arch Coat phases with trail construction - deleted. One month clearing (Site Prep) and six months constr trails (Grading) per project description.

Off-road Equipment - Equipment set per project description. No Concrete/Industrial Saws used. Horsepower for 4-foot trail dozer from SWECO.

Off-road Equipment - Equipment set per project description. No Graders used. Horsepower for 4-foot trail dozer from SWECO.

Trips and VMT - Per project description, 15-person crew (30 trips) for clearing (Site Preparation), 3 to 4-person crew (8 trips) for trail construction (Grading).

Grading - Total Acres Disturbed left at values calculated by CalEEMod: 0.5 for Site Preparation and 0 for Grading.

Architectural Coating - Per project description, the only structure would be pre-manufactured. No on-site architectural coating.

Vehicle Trips - 221 weekday and 214 weekend trips per day based on traffic study. Divided by 0.73 acres constructed per year, the effective rate per acre is 302.73 weekdays and 293.15 weekends.

Consumer Products - No consumer products.

Area Coating - No architectural coating. Square footage set to 0.

Landscape Equipment - No landscaping during long-term operation.

Energy Use -

Water And Wastewater - No water use. Outdoor water use set to zero.

Solid Waste - Solid waste generation set to 0.

Land Use Change - 7.5 miles of trail and 4 foot average width. For CO2e due to clearing of brush.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	47698	0
tblConstructionPhase	NumDays	2.00	131.00
tblConstructionPhase	NumDays	1.00	22.00
tblGrading	AcresOfGrading	0.00	0.50
tblLandUseChange	CO2peracre	14.30	4.31
tblOffRoadEquipment	HorsePower	255.00	109.00
tblOffRoadEquipment	HorsePower	255.00	109.00
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.06	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	30.00
tblTripsAndVMT	WorkerTripNumber	5.00	8.00
tblVehicleTrips	ST_TR	1.59	293.15
tblVehicleTrips	SU_TR	1.59	293.15
tblVehicleTrips	WD_TR	1.59	302.73
tblWater	OutdoorWaterUseRate	869,781.39	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	0.6464	3.8717	6.3722	7.6100e-003	6.4294	0.2729	6.7023	3.4145	0.2510	3.6655	0.0000	706.6801	706.6801	0.1283	0.0000	709.3749
Total	**0.6464**	**3.8717**	**6.3722**	**7.6100e-003**	**6.4294**	**0.2729**	**6.7023**	**3.4145**	**0.2510**	**3.6655**	**0.0000**	**706.6801**	**706.6801**	**0.1283**	**0.0000**	**709.3749**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	0.6464	3.8717	6.3722	7.6100e-003	6.4294	0.2729	6.7023	3.4145	0.2510	3.6655	0.0000	706.6801	706.6801	0.1283	0.0000	709.3749
Total	**0.6464**	**3.8717**	**6.3722**	**7.6100e-003**	**6.4294**	**0.2729**	**6.7023**	**3.4145**	**0.2510**	**3.6655**	**0.0000**	**706.6801**	**706.6801**	**0.1283**	**0.0000**	**709.3749**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7310	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.8230	3.2358	17.0434	0.0165	1.1557	0.0323	1.1880	0.3091	0.0296	0.3387		1,466.1315	1,466.1315	0.1103		1,468.4467
Total	**2.5540**	**3.2358**	**17.0435**	**0.0165**	**1.1557**	**0.0323**	**1.1880**	**0.3091**	**0.0296**	**0.3387**		**1,466.1316**	**1,466.1316**	**0.1103**	**0.0000**	**1,468.4468**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.7310	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	1.8230	3.2358	17.0434	0.0165	1.1557	0.0323	1.1880	0.3091	0.0296	0.3387		1,466.1315	1,466.1315	0.1103		1,468.4467
Total	**2.5540**	**3.2358**	**17.0435**	**0.0165**	**1.1557**	**0.0323**	**1.1880**	**0.3091**	**0.0296**	**0.3387**		**1,466.1316**	**1,466.1316**	**0.1103**	**0.0000**	**1,468.4468**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	3/1/2015	3/31/2015	5	22	
2	Grading	Grading	4/1/2015	9/30/2015	5	131	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Concrete/Industrial Saws	0	0.00	81	0.73
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	0	0.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	8.00	109	0.40
Grading	Rubber Tired Dozers	1	1.00	109	0.40
Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	30.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0462	0.0000	6.0462	3.3128	0.0000	3.3128			0.0000			0.0000
Off-Road	0.3604	3.4321	2.4256	3.1200e-003		0.2686	0.2686		0.2472	0.2472		327.4877	327.4877	0.0978		329.5408
Total	**0.3604**	**3.4321**	**2.4256**	**3.1200e-003**	**6.0462**	**0.2686**	**6.3148**	**3.3128**	**0.2472**	**3.5600**		**327.4877**	**327.4877**	**0.0978**		**329.5408**

3.2 Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2860	0.4395	3.9466	4.4900e-003	0.3832	4.2500e-003	0.3874	0.1016	3.8600e-003	0.1055		379.1924	379.1924	0.0306		379.8341
Total	**0.2860**	**0.4395**	**3.9466**	**4.4900e-003**	**0.3832**	**4.2500e-003**	**0.3874**	**0.1016**	**3.8600e-003**	**0.1055**		**379.1924**	**379.1924**	**0.0306**		**379.8341**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0462	0.0000	6.0462	3.3128	0.0000	3.3128			0.0000			0.0000
Off-Road	0.3604	3.4321	2.4256	3.1200e-003		0.2686	0.2686		0.2472	0.2472	0.0000	327.4877	327.4877	0.0978		329.5408
Total	**0.3604**	**3.4321**	**2.4256**	**3.1200e-003**	**6.0462**	**0.2686**	**6.3148**	**3.3128**	**0.2472**	**3.5600**	**0.0000**	**327.4877**	**327.4877**	**0.0978**		**329.5408**

3.2 Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2860	0.4395	3.9466	4.4900e-003	0.3832	4.2500e-003	0.3874	0.1016	3.8600e-003	0.1055		379.1924	379.1924	0.0306		379.8341
Total	**0.2860**	**0.4395**	**3.9466**	**4.4900e-003**	**0.3832**	**4.2500e-003**	**0.3874**	**0.1016**	**3.8600e-003**	**0.1055**		**379.1924**	**379.1924**	**0.0306**		**379.8341**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.2703	2.5741	1.8192	2.3400e-003		0.2015	0.2015		0.1854	0.1854		245.6157	245.6157	0.0733		247.1556
Total	**0.2703**	**2.5741**	**1.8192**	**2.3400e-003**	**0.7528**	**0.2015**	**0.9542**	**0.4138**	**0.1854**	**0.5991**		**245.6157**	**245.6157**	**0.0733**		**247.1556**

3.3 Grading - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.1172	1.0524	1.2000e-003	0.1022	1.1300e-003	0.1033	0.0271	1.0300e-003	0.0281		101.1180	101.1180	8.1500e-003		101.2891
Total	**0.0763**	**0.1172**	**1.0524**	**1.2000e-003**	**0.1022**	**1.1300e-003**	**0.1033**	**0.0271**	**1.0300e-003**	**0.0281**		**101.1180**	**101.1180**	**8.1500e-003**		**101.2891**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.2703	2.5741	1.8192	2.3400e-003		0.2015	0.2015		0.1854	0.1854	0.0000	245.6157	245.6157	0.0733		247.1556
Total	**0.2703**	**2.5741**	**1.8192**	**2.3400e-003**	**0.7528**	**0.2015**	**0.9542**	**0.4138**	**0.1854**	**0.5991**	**0.0000**	**245.6157**	**245.6157**	**0.0733**		**247.1556**

3.3 Grading - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.1172	1.0524	1.2000e-003	0.1022	1.1300e-003	0.1033	0.0271	1.0300e-003	0.0281		101.1180	101.1180	8.1500e-003		101.2891
Total	**0.0763**	**0.1172**	**1.0524**	**1.2000e-003**	**0.1022**	**1.1300e-003**	**0.1033**	**0.0271**	**1.0300e-003**	**0.0281**		**101.1180**	**101.1180**	**8.1500e-003**		**101.2891**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.8230	3.2358	17.0434	0.0165	1.1557	0.0323	1.1880	0.3091	0.0296	0.3387		1,466.1315	1,466.1315	0.1103		1,468.4467
Unmitigated	1.8230	3.2358	17.0434	0.0165	1.1557	0.0323	1.1880	0.3091	0.0296	0.3387		1,466.1315	1,466.1315	0.1103		1,468.4467

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	220.99	214.00	214.00	540,086	540,086
Total	220.99	214.00	214.00	540,086	540,086

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.380748	0.119245	0.176820	0.180714	0.091672	0.010142	0.015516	0.004111	0.002387	0.000898	0.009847	0.001341	0.006560

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7310	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Unmitigated	0.7310	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6805					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Total	**0.7310**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**		**1.7000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0505					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6805					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.6000e-004	1.6000e-004	0.0000		1.7000e-004
Total	**0.7310**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6000e-004**	**1.6000e-004**	**0.0000**		**1.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation