Appendix A

Initial Study and Public Comments

YOSEMITE UNDER CANVAS

Initial Study/Mitigated Negative Declaration

Prepared for
Tuolumne County Community Resources Agency

February 2019

ESA

UNDER CANVAS®

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Tuolumne County Community Resources Agency

February 2019

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ENVIRONMENTAL CHECKLIST

Initial Study

1. Project Title:	Yosemite Under Canvas
2. Lead Agency Name and Address:	Tuolumne County Community Resources Agency 2 S. Green Street Sonora, CA 95370
3. Contact Person and Phone Number:	Natalie Rizzi, Planner (209) 533-5936
4. Project Location:	Tuolumne County
5. Project Sponsor's Name and Address:	Under Canvas Inc. 1172 Happy Lane Belgrade, MT 59714
6. General Plan Designation(s):	Parks and Recreation (R/P)
7. Zoning:	Commercial Recreation (C-K) and Open Space-1 (O-1)

8. Description of Project

See Project Description below.

9. Surrounding Land Uses and Setting.

See Project Description below.

10. Other public agencies whose approval is required.

See Project Approvals and Permits below.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

See Cultural Resources section below.

Introduction

Under Canvas Inc. is proposing the Yosemite Under Canvas Project (project), which is a 99-tent luxury campground with supporting facilities located in Hardin Flat, east of the community of Groveland and west of Yosemite National Park, in Tuolumne County, California. Yosemite Under Canvas is a transient tent (no fixed structures) camp for guests to stay March to October as weather allows. Under Canvas Inc. specializes in "glamping" camps and currently has eight operational camps within the United States. "Glamping" is a growing trend in camping accommodations where the host provides all the provisions necessary to camp out in a particular location. Under Canvas camps provide an opportunity for individuals and families to experience nature without the substantial investment in tents or recreational vehicles (RVs), as is typically required. Under Canvas camps provide guests with canvas tents, beds, bathroom facilities, meals, and community fire pits. Potable water and sanitary sewer are provided by on-site public systems owned by Under Canvas. A total of 99 tents are proposed for the Yosemite Under Canvas camp along with an office/ guest check-in tent, commercial kitchen, communal bathrooms and a number of support tents.

Project Location

The proposed project site is east of the town of Groveland and west of Yosemite National Park in southern Tuolumne County and is located on the Ascension Mountain, CA 7.5' U.S. Geological Survey (USGS) Quadrangle (**Figures 1** and **2**). It falls within the southeastern portion of Section 26, Township 1 South, Range 18 East, Mount Diablo Baseline and Meridian. The proposed project site is located within unincorporated Tuolumne County, totaling approximately 80.1 acres. Access to the site is provided by Hardin Flat Road via State Route (SR) 120. The site consists of open land and was previously used for forestry and logging. Adjacent land uses include scattered private residences, recreation facilities, and open space. The nearest building is a Caltrans snow plow garage approximately 1,250 feet north of the nearest project facilities. The nearest residence is approximately 1,300 feet southeast of the nearest project facilities. Elevation in the project site ranges from 3,740 feet above mean sea level in the east to 4,050 feet above mean sea level in the west.

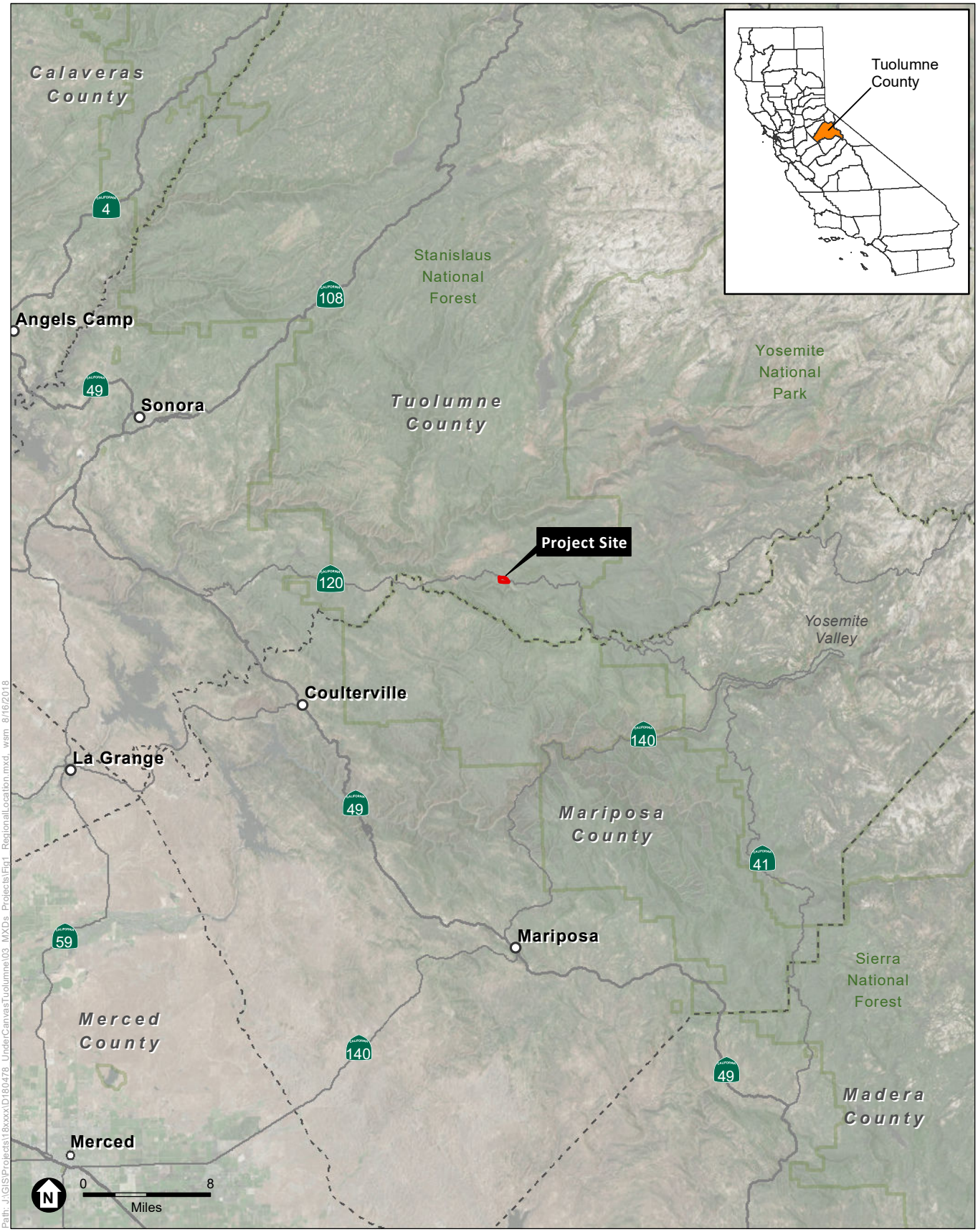
Proposed Project

Yosemite Under Canvas is proposed to be built on two parcels (APNs 68-120-62 and -63) totaling approximately 80.1 acres, located in Hardin Flat, California. The parcels are zoned Commercial Recreation (C-K) and Open Space-1 (O-1). The project would be located within the C-K zoning portion of the project site, which requires a site development permit for a campground use. No development will occur on land with O-1 designation. A total of 99 tents are proposed for the camp along with an office/guest check-in, commercial kitchen, communal bathrooms and a number of support tents.

The following is a summary of the camp amenities and water/wastewater quantity requirements:

- There are a total of 99 tents proposed for the camp. Average occupancy is 2.5 people per tent.

- There are 77 Deluxe/Suite tents proposed that will each have a wash basin, shower, and toilet. Four of these sites will be Americans with Disabilities Act (ADA) compliant.
- There are 22 Safari tents proposed that will use a communal bathroom centrally located near the Safari tents.
- There are two communal bathroom facilities; these will be manufactured off-site and have six stalls, with each stall consisting of a toilet, sink, and shower.
- There is one large reception/dining tent with an adjacent commercial kitchen trailer, and a number of support (housekeeping and maintenance) temporary storage containers.
- The proposed bath cabins and commercial kitchen are mobile facilities on wheels and are manufactured off-site and assembled on-site.
- An in-ground swimming pool is proposed near the reception/dining tent.
- ADA accessibility is taken into consideration at all Under Canvas camps. Under Canvas will ensure that there are parking spaces, camping tents, and bathroom facilities that are built to ADA standards included in the finalized camp plans.
- Single service meals are proposed to be prepared and served on-site from the commercial kitchen and will only be offered to guests staying at the camp.
- Drinking and potable water at the camp is proposed to be provided by ground water source well(s). The source will be developed as a Public Water Supply.
- All water fixtures use minimal water. The wash facilities have shower heads and faucets that turn on by pulling a handle or pushing a knob; as soon as the handle or knob is released the water turns off. Water use at Under Canvas camps is typically under 12 gallons per day (gpd)/ person.
- The toilets will use 0.8 to 1.2 gallons of water per flush.
- Yosemite Under Canvas water and wastewater systems will be winterized after closing for the season. The systems would be tested by a State Water Board Division of Drinking Water certified laboratory prior to being placed in use each season.
- Drinking water will be provided from a certified source in compliance with State and Tuolumne County standards for a proposed well.
- Potable water samples are to be tested the first Tuesday of each month for bacteria.
- The wastewater and water use quantities will be monitored and submitted to the Tuolumne County Community Resources Agency, Environmental Health Division, or as directed.
- Water usage monitoring is proposed to verify water use of 20 gpd per person or less. Water use is metered or measured in all Under Canvas Camps.
- Power for the camp will provided by a local utility company and supplemented with solar systems.
- Quiet hours at Yosemite Under Canvas will be from 9PM to 6AM. Operation of the facility will not employ any sources of amplified noise.



SOURCE: Esri, 2015; ESA, 2018

Yosemite Under Canvas Project

Figure 1
Regional Location

SOURCE: USDA, 2016; ESA, 2018

Yosemite Under Canvas Project

Figure 2
Project Site

Components of the Project

Project Design

See **Figure 3** and **Appendix A** for details on project design.

Project Facilities

There are no traditional buildings (with concrete foundations) proposed for the Yosemite Under Canvas Project; however, there are communal bathrooms, a commercial kitchen, laundry and housekeeping, and a lobby tent with dining area. These facilities would not be permanent fixtures on the land. Improvements to support the camp include wastewater treatment, a water supply well, power to the kitchen, laundry, and communal bathrooms. Solar systems provide small electrical needs in guest tents and for trail lighting.

There are 99 tents proposed for the project. The approximate tent footprints range from 200 – 400 square feet. The guest tents are constructed on wood decks and have beds, wood/or pellet stoves (with spark arrestors), hot water for shower, sink, and a water closet. The proposed layout for the tents sites is shown on Figure 3 and in the project design plans in Appendix A. These tent sites are approximate locations; exact tent locations will not be determined until final engineering design is completed.

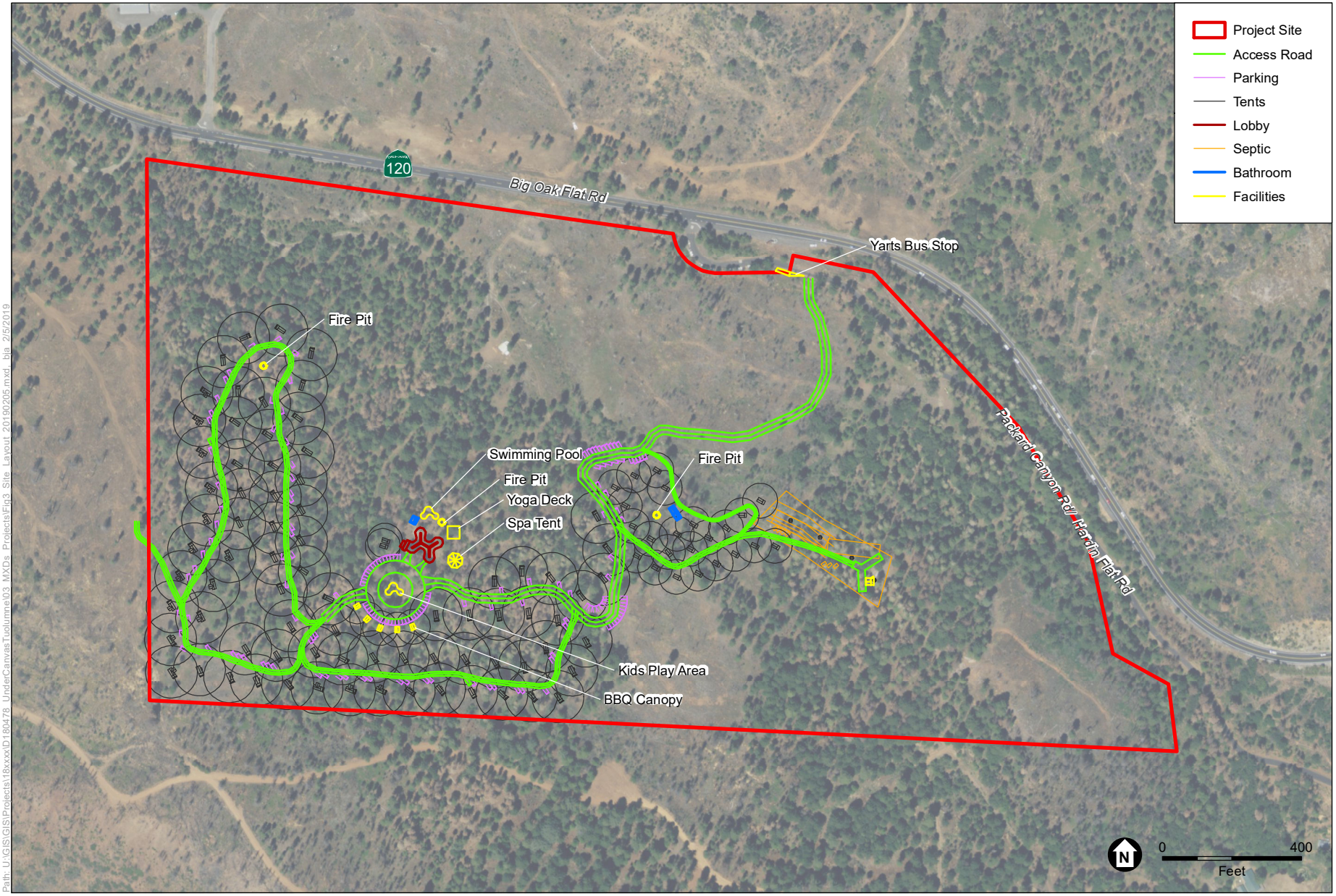
Lighting for the lobby, common areas, and tents are proposed to be low voltage solar lighting. All lighting will meet dark sky standards while still providing safety and guidance for guests.

Internal Traffic and Circulation

There is existing public access to the property by way of Hardin Flat Road via SR 120. Bus stops for the Yosemite Area Regional Transportation System (YARTS) are proposed on each side of Hardin Flat Road at the entrance to the Yosemite Under Canvas facility. The bus stops are designed to accommodate a 45-foot YARTS coach. These stops will provide Yosemite Under Canvas guests with the option to use the regional public transit system to access Yosemite National Park and other regional destinations. The YARTS operates between May and September and offers three round trips a day into Yosemite National Park. Internal circulation will be provided by a main access road (Under Canvas Way) and internal loop roads. Parking will be provided along proposed camp roads and will be located near the deluxe and suite tents. The safari tents will have a common parking area. Approximately 130 parking spaces will be provided for guests and employees. All of the tents will be accessed via lighted paths and trails.

Bridges

The proposed main access roadway (Under Canvas Way) will require the crossing of two ephemeral drainages. Bridges are proposed to completely span these drainages. Bridge design will be based on ASHTO bridge standards for low volume traffic standards. The two lane bridge width will be 24 feet designed for HS-20 loading. The bridges will be designed to pass 100-year flood flows and will avoid direct impacts to the channels.



Path: U:\GIS\GIS\Projects\18xxxx\D180478_UnderCanvasTuolumne\03_MXDs_Projects\Fig3_Site_Layout_20190205.mxd bja 2/5/2019

SOURCE: USDA, 2016; ESA, 2018

Yosemite Under Canvas Project

Figure 3

Project Site Plan

Water Supply and Treatment

Designs and documents for the proposed Public Water Supply (PWS) will be submitted for agency approvals. The PWS is classified as a Transient Non-Community water system. Preliminary analysis of water use is based on the proposed uses listed in **Table 1.**

TABLE 1
PROPOSED WATER USE

Proposed Use	Design GPD	Unit Per	Number of Units	GPD	Notes
Tents (99), occupancy 2.5 guests/tent	20	Person	247.5	4,950	20 gpd/camper
Employees	10	Person	40	400	10 gpd/employee
Laundry Facility	550	Machine	2	1,100	550 gpd/machine
Food Preparation	4	Service	375	1,500	4.0 gpd/single service
Swimming Pool	100	Pool	1	100	Will require approximately 70.000 gallons to fill at start of season
Total Water Use				**8,050**	

Based on this analysis, the water source will need to be developed to supply an average demand of 8,050 gpd. The proposed groundwater source wells should be developed to supply 20 to 30 gallons per minute (gpm).

Water distribution includes water storage cisterns, small diameter distribution lines, repressure pumps, source development, and services to the laundry, lobby tent, bath cabins and deluxe and suite tents. Under Canvas Camps typically do not have large water storage tanks and infrastructure to support fire hydrants and large water demands, and none are proposed for this project. Estimated instantaneous flows for the distribution system are 80 gpm. General PWS layout will be finalized pending development of a ground water source.

Wastewater will be treated on-site through the use of a septic tank for storage and settling and a leach field for disposal. A sewer main will be installed to collect the effluent and transport it to the septic tank for settling. The settled effluent will then be pressure dosed to a leach field with sand trenches for disposal. The water treatment system capacity has been preliminarily designed to utilize two disposal areas located where there may be acceptable soils and to allow for gravity wastewater collection and disposal. The two disposal areas compliment the tent area zones/layout on this site and are shown on Figure 3 and Appendix A. One of the two disposal areas serves as a replacement area if ever required. A detailed low impact wastewater system will be designed based on-site conditions and a soils analysis.

Preliminary soils information is indicative that the disposal is viable in the areas shown on Figure 3. A soils evaluation will be completed by a qualified consultant to determine the viability of the proposed septic system. Specific treatment designs will be based on percolation rates, soils analysis, ground water, and other considerations for complete treatment to minimize impacts to the natural

environment. The following table (**Table 2**) is a calculation of the peak daily disposal for the two disposal areas.

TABLE 2
PEAK DAILY WASTEWATER DISPOSAL

Proposed Use	Design GPD	Unit Per	Number of Units	GPD
Disposal Area 1				
Tents (77 – tents # 23-99), occupancy 2.5 guests/tent	20	Person	192.5	3,850
Employees	10	Person	40	400
Laundry	550	Machine	2	1,100
Food Preparation	4	Service	375	1,500
Total Wastewater Area 1				**6,850**
Disposal Area 2				
Tents (22 – tents # 1-22), occupancy 2.5 guests/tent	20	Person	55	1,100
Total Wastewater Area 2				**1,100**

NOTES:
1) Percolation and absorption rates will be based on soils mapping.
2) Septic tanks are to have an Orenco 8" bio-tube filler or equal prior to the disposal area.
3) Food preparation kitchen will have a grease trap.
4) Wastewater system design is to meet or exceed CA OWTS Requirements.

The analysis of wastewater disposal has been completed in consideration of the viability of an on-site wastewater disposal system. Disposal Area 1 includes wastewater coming from tents and the kitchen, lobby, and laundry facilities. The laundry facility has different wastewater characteristics than the tents; however, it will be treated as black water for disposal purposes. Disposal Area 2 includes wastewater coming from a six stall bath cabin, and will have capacity to handle Disposal Area 1 if necessary. Wastewater treatment will be designed to meet the "guidelines for design and evaluation of special design on-site sewage treatment and disposal systems." These minimum design and evaluation standards have been developed pursuant to Tuolumne County Ordinance Code (TCOC), Section 13.08.270A, August 4, 2009, Tuolumne County Environmental Health Division.

Fires

Camp fires are only allowed in common areas managed by camp staff. The tents may have wood burning or pellet stoves with code compliant chimney spark arrestors. The spark arrestors will be constructed of woven or welded wire screening of 12 USA standard gage wire (0.1046 inch) having openings not exceeding 1/2-inch. The net free area of the spark arrestor will not be less than four times the net free area of the outside of the chimney outlet. The ashes are removed by staff in metal containers and disposed of in a steel container. Firewood and combustible materials will not be stored in unenclosed spaces beneath tents or on decks under eaves, canopies or other projections or overhangs. When required by the County code official, storage of fire wood and combustible material stored in the defensible space will be located a minimum of 20 feet from structures and separated from the crown of trees by a minimum horizontal distance of 15 feet. Under Canvas will

prepare a Fire Protection and Evacuation Plan for submittal to the Tuolumne County Fire Prevention Bureau for review and approval.

Construction Methods and Design

Construction of the Yosemite Under Canvas Project will employ currently accepted typical construction methods. The contractor will establish access routes and staging areas for travel within the site and storage of materials and equipment. If needed, dust control will employ a standard water truck equipped with spray nozzles. The Yosemite Under Canvas plans are based on minimal site disturbance based on seasonal occupancy. Tent pads will require minimal excavation. Access roads and paths have been designed and will be constructed to minimize cut and fill requirements. The project follows Low Impact to Hydrology (LITH) Design Guidelines for the design of roads and paths. These guidelines have been developed to minimize erosion using outsloped roads. Infrastructure for wastewater collection and water distribution has been designed and will be constructed to minimize trenching depths and disturbance. Wherever possible, lines are placed in roads, paths, or disturbed areas.

Schedule and Work Hours

Construction of the project is expected to take one construction season, starting in April 2019 and extending to August 2019, for a total of five months of construction activity. Construction activities would generally take place during normal working hours, 7:00 a.m. to 7:00 p.m., Monday through Friday.

Equipment

Anticipated construction equipment for the construction of the proposed project is shown in **Table 3**. The actual equipment used during construction would be determined by the contractor and the construction schedule.

TABLE 3
CONSTRUCTION EQUIPMENT

Equipment	Construction Purpose
Bulldozer	Earthwork construction and clearing and grubbing
Grader	Ground leveling
Mini Excavator	Soil manipulation
Skid Steer Loader	Soil or gravel manipulation
Trencher	Trench digging

Project Approvals and Permits

The Tuolumne County Community Resources Agency would adopt the Initial Study/Mitigated Negative Declaration (IS/MND) as the lead agency. Additionally, the following permits, reviews, consultations, and approvals (see **Table 4**, below) would be required to be completed or approved prior to the commencement of project construction.

TABLE 4
PERMITS AND APPROVALS NEEDED

Agency	Permit/Approval	Status
State		
California Department of Fish and Wildlife (CDFW)	California Fish and Game Code Section 1600-1602 Streambed Alteration Agreement	Applied January 2019.
California State Water Resources Control Board (SWRCB)	National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit	Not yet applied. Anticipated application date of early 2019.
Local		
Tuolumne County	Tuolumne County Grading Permit	Not yet applied. Anticipated application date of early 2019.

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 and Forestry 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: (To be completed by the Lead Agency)

On the basis of this initial study:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ 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.

_____ _____

Signature Date

_____ _____

Signature Date

Environmental Checklist

Aesthetics

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

Environmental Setting

Aesthetic or visual resources include the "scenic character" of a particular region and site. Scenic features can include both natural features, such as vegetation and topography, and manmade features (e.g. historic structures). Areas that are more sensitive to potential effects are usually readily observable, such as land found adjacent to major roadways and hilltops.

Visual Environment

Located in a relatively undeveloped area of Tuolumne County, the project area is characterized by mixed conifer forest, the Sierra Nevada Mountain Range, and SR 120. Adjacent land uses include scattered private residences, recreation facilities, and open land. Approximately 20.1 acres of the site were completely burned in 2013 during the Rim Fire. Burned trees in these areas have been cleared. In addition to areas that were completely burned, individual trees and small stands of trees outside of those areas were also damaged or burned. The landscape is still recuperating from these fires and the vegetation of the project area is recovering. Topography of the project area is relatively undisturbed, with the exception of SR 120 and a few graded local roads. The nearest residence is located approximately 1,300 feet southeast and downhill of the nearest project facilities. Views of the project site from off-site residences and roadways are obscured by living trees and topography. Potential viewer groups include vehicle occupants on SR 120 and Hardin Flat Road.

Discussion

a, c) The project site is designated as Parks and Recreation (R/P) by the Tuolumne County General Plan. There are no State or locally designated scenic vistas or notable geographic features identified in the vicinity of the project site in the Tuolumne County General Plan; as a result, the proposed project would not have an effect on a scenic vista (Tuolumne County, 1996).

Construction of the proposed project would involve grading, clearing of vegetation, and the presence of equipment within the project site. These impacts would be temporary in

nature and would not extend beyond the anticipated single season of construction activity. Additionally, the tree line surrounding the northern and eastern projects boundaries would be maintained which would block views from surrounding roadways and residences. Given the relatively short-term nature of these construction-related activities and screening from trees along the project boundaries, construction-related visual impacts are considered **less than significant**.

Operation of the proposed project includes the use of 99 luxury campsites and associated infrastructure. However, the visual character of the site would be minimally impacted, as the surrounding mountainous terrain and presence of dense trees would obscure direct views of the proposed project from SR 120, Hardin Flat Road, and residences. For these reasons, visual impacts from the proposed project are considered a **less-than-significant** impact.

b) A review of the current California Department of Transportation (Caltrans) Map of Designated Scenic Routes indicates that there are no officially designated state scenic highways within Tuolumne County, although portions of SR 49 and SR 108 from on the western side of the County are Eligible State Scenic Highways (approximately 15 miles west of the project site) and a portion of SR 120 through Yosemite National Park is designated as a National Scenic Byway (approximately five miles east of the project site; Caltrans, 2011). Therefore, the proposed project would result in **no impact**.

d) The project site is located within a rural setting where lighting is minimal. Scattered rural residential land uses and passing vehicles generate the primary sources of nighttime light and daytime glare in the project vicinity. The proposed project includes lighting for the lobby, common areas, pathways, signage, and tents. However, all light sources will utilize low voltage lighting. Additionally, all lighting would meet International Dark-Sky Association (IDA) dark sky standards. Therefore, the proposed project would result in a **less-than-significant** impact.

References

California Department of Transportation (Caltrans), 2011. California Scenic Highway Mapping System, Tuolumne County. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed June 29, 2018.

Tuolumne County, 1996. Tuolumne County General Plan. Available: https://www.tuolumnecounty.ca.gov/185/General-Plan-Policy. Accessed June 27, 2018.

Agricultural and Forest Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
2. AGRICULTURAL AND FOREST 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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

Environmental Setting

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) has not prepared a map of Tuolumne County (CDC, 2015). However, based on soil types, there is no Prime Farmland, Unique Farmland, or Farmland of Statewide importance in Tuolumne County (CDC, 2018). Additionally, the project site and surrounding parcels are not currently under a Williamson Act contract (CDC, 2017a). The project site is zoned as Commercial Recreation (C-K) and Open Space-1 (O-1) under the Tuolumne County Ordinance Code and designated as Parks and Recreation (R/P) by the Tuolumne County General Plan. The project site is not zoned as forestland, timberland, or Timberland Production.

The majority of the project site consists of mixed conifer forest. The 2013 Rim Fire, which burned approximately 257,000 acres in Tuolumne and Mariposa counties, burned portions of the project site and surrounding area. The landscape is still recuperating from these fires and the much of the vegetation of the project area is still recovering. Approximately 20.1 acres of the site were completely burned in 2013 during the Rim Fire. Burned trees in these areas have been cleared. In addition to areas that were completely burned, individual trees and small stands of trees outside of those areas were also damaged or burned. Due to the recent wildfire history of the project site, much of the mixed conifer forest community in the project site is disturbed and does not support

plant densities and diversity typical of undisturbed examples of this community type. Many trees within the project site were burned during the wildfires. Many saplings are found throughout the project site; unburned matures trees are located in healthy stands left untouched by the fire.

According to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program, the project site is not within a mapped Priority Landscape (CAL FIRE, 2010).

Discussion

a) The project site is not listed as Prime Farmland, Unique Farmland, or Farmland of Statewide importance pursuant to the FMMP. Additionally, the nearest important farmland that is mapped by the FMMP is located approximately 35 miles to the west in Stanislaus County (CDC, 2017b). Therefore, there would be **no impact**.

b) The project site is not currently used for agricultural purposes and is not designated for agricultural use by the Tuolumne County General Plan or zoned for exclusive agricultural use under Title 17 of the Tuolumne County Ordinance Code. Additionally, as stated above, the project site and surrounding parcels are not currently under a Williamson Act contract. Therefore, the proposed project would have **no impact** relating to existing zoning for agricultural use or a Williamson Act contract.

c) The project is located on lands zoned Commercial Recreation (C-K) under the Tuolumne County Ordinance Code and designated as Parks and Recreation (R/P) by the Tuolumne County General Plan (the project site also includes land zoned Open Space-1 under the Tuolumne County Ordinance Code; however, no development will occur on land with the Open Space-1 designation). The Commercial Recreation zoning includes recreational facilities such as campgrounds as an allowable land use subject to first securing a Site Development Permit. As the proposed project is an allowable use and the site zoning will not change, there would be no conflict with existing zoning for, or cause for rezoning of, forest land, timberland, or timberland zoned Timberland Production. Therefore, there would be **no impact**.

d, e) There would be no changes to the existing environment that would result in conversion of Farmland to non-agricultural use. The proposed project would result in the loss of some mixed conifer forest habitat. However, due to the nature of the project and the proposed project design, the project will remove the minimum number of trees possible in order to minimize impacts to forest lands. Additionally, prior to the conversion of land to a land use other than growing timber, a Timberland Conversion permit must be reviewed and approved by CAL FIRE. A less than three-acre conversion exemption may be used for a one-time exemption for up to three acres of timberland to be converted to another use. Due to the abundance of mature trees and forest land in the project area and immediate vicinity, the minimal amount of forest land impacted by the proposed project, and the requirement to secure a timberland conversion permit from CAL FIRE, this is a **less-than-significant** impact.

References

California Department of Conservation (CDC), 2015. California Farmland Conversion Report. Available: http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2010-2012/FCR/FCR%202015_complete.pdf. Accessed June 27, 2018.

CDC, 2017a. State of California Williamson Act Contract Land. Available: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/2016%20Statewide%20Map/WA_2016_11X17.pdf. Accessed June 27, 2018.

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Air Quality

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. 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?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Environmental Setting

Under amendments to the federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (USEPA) has classified air basins or portions thereof as either "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the national standards have been achieved. The California CAA, which is patterned after the federal CAA, also requires areas to be designated as "attainment" or "non-attainment" for the state standards. Thus, areas in California have two sets of attainment/non-attainment designations: one set with respect to the national standards and one set with respect to the state standards. The Mountain Counties Air Basin is currently designated as a nonattainment area for the state ozone standard and unclassified for state particulate matter (PM_{10} and $PM_{2.5}$) standards based on a lack of available monitoring data.

The Tuolumne County Air Pollution Control District (TCAPCD) is the regional air quality authority in the project area. The TCAPCD has established thresholds of significance for assessing potential air quality impacts under CEQA (TCAPCD, 2013). Specifically, a project would have a significant impact on air quality if, pursuant to TCAPCD regulations, if would result in emissions in excess of:

- 100 tons per year or 1,000 pounds per day of reactive organic gases (ROG);
- 100 tons per year or 1,000 pounds per day of oxides of nitrogen (NOx);
- 100 tons per year or 1,000 pounds per day of particulate matter (PM10); or
- 100 tons per year or 1,000 pounds per day of carbon monoxide (CO).

Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. Reasons for greater sensitivity include pre-existing health problems, proximity to an emissions source, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential areas are also sensitive to poor air quality because people usually stay home for extended periods of time. The nearest sensitive receptor to the project is a residence located approximately 1,300 feet southeast and downhill of the nearest project facilities.

Discussion

a) Although designated as a non-attainment area for state ozone standard, Tuolumne County does not currently have a Clean Air Plan that addresses efforts to reduce ozone precursors within the County. However, the County General Plan does contain an Air Quality Element that was updated in March of 2014. The following General Plan Policies and Implementation Measures are identified with respect to land development projects:

Policy 12.A.1: Accurately determine and fairly mitigate the local and regional air quality impacts of land development projects proposed in the county.

Implementation Measure 12.A.a: Work with other agencies to develop a consistent and effective approach to air quality planning and management.

Implementation Measure 12.A.b: Require significant air quality impacts identified during CEQA review to be consistently and fairy mitigated.

Implementation Measure 12.A.c: Require all air quality mitigation measures to be feasible, implementable and verifiable.

As discussed below in response to Air Quality questions b) and c), the proposed project would generate emissions that the TCAPCD would consider to be a less-than-significant air quality impact. Consequently, the proposed project would be consistent with applicable policies and implementation measures of the County's Air Quality Element with respect to land use development and would therefore not conflict or obstruct implementation of the goals of the County General Plan with respect to air quality. This impact would be **less than significant**.

b) In order to determine whether the proposed project would result in a violation of air quality standards or exacerbate existing ozone violations, project related emissions are estimated and compared to the thresholds of significance established by TCAPCD. Project construction-related and operational emissions were conservatively estimated using the CalEEMod model version 2016.3.2. As the model does not have land use estimates specific to recreational camping developments, a motel land use was conservatively assumed as a proxy for the proposed campground. This is a conservative assumption because it assumes operational emissions from mobile sources (vehicle trips) and natural gas combustion 12 months per year, while the proposed campground would only operate March through

October. Additionally, natural gas combustion associated with the campground would likely be substantially less than that associated with a motel land use.

Estimated construction-related emissions are presented in **Table AIR-1** below. These emissions assume off-road equipment operation excavation and grading for the proposed campground and septic system as well as building construction, which is also likely conservative as a majority of the proposed structures would be constructed off-site and transported and installed prefabricated. These emissions also consider vehicle trips by construction workers and vendor truck trips bringing concrete and other materials to the project site over the course of ten months. As can be seen from Table AIR-1, construction-related emissions of the proposed project would be well below the significance thresholds established by TCAPCD. Grading for the proposed improvements may create fugitive dust. Therefore, the project will be conditioned to mitigate dust during construction through the use of a watering truck or other dust suppressant device, as required by Section 12.20.370 of the Tuolumne County Ordinance Code.

Table AIR-1 also presents the operational emissions associated with vehicle trips and natural gas combustion. In addition, a separate CalEEMod model run was performed to estimate emissions associated with wood burning and pellet stoves proposed for the tents. This additional model run conservatively assumes that all 99 tents would operate a woodstove at the default model usage rate of 82 days per year. As can be seen from Table AIR-1, operational emissions of the proposed project would be well below the significance thresholds established by TCAPCD. Consequently, both construction-related emissions and operational emissions associated with the proposed project would be **less than significant**. In addition, the presence of the YARTS bus stops at the entrance to the Yosemite Under Canvas facility will provide guests with the option to use the regional public transit system to access Yosemite National Park and other regional destinations. This has the potential to further reduce operational emissions through trip reductions.

TABLE AIR-1
MAXIMUM ANNUAL CRITERIA POLLUTANT EMISSIONS (TONS/YEAR)

Emissions Category	ROG	NOx	PM10	CO
Construction Emissions				
Maximum Annual Construction Emissions	1.62	3.24	0.32	2.96
TCAPCD Thresholds	100	100	100	100
Exceed Thresholds?	No	No	No	No
Operational Emissions				
Annual Operational Emissions	0.89	0.61	0.21	1.79
Woodstove Emissions	1.14	0.59	0.93	6.13
Maximum Annual Operational Emissions	2.03	1.20	1.14	7.92
TCAPCD Thresholds	100	100	100	100
Exceed Thresholds?	No	No	No	No

SOURCE: ESA, 2018 (Appendix B)

c) The thresholds of significance applied to project emission in air quality question b), above, were developed by TCAPCD based on the trigger levels for the federal New Source Review Program and TCAPCD's Regulations for new or modified sources to represent a cumulatively considerable contribution to air quality including ozone precursors ROG and NOx. Consequently, the analysis in air quality question b), above, which identified a less than significant impact also applies to the project's potential to result in a cumulatively considerable net increase in non-attainment pollutants. This impact would be **less than significant**.

d) The proposed project would generate toxic air contaminants (TACs) in the form of diesel particulate matter during construction activities. Some California Air Districts such as the Bay Area Air Quality Management District (BAAQMD) have developed methodologies for analyzing health risk impacts and in doing so have established a 1,000-foot zone of influence from a source beyond which impacts from TAC exposure in most common instances are assumed to be less than significant. Given the absence of the TAC threshold for Tuolumne County, this analysis uses the BAAQMD methodology for assessing TAC impacts. Because construction areas of the proposed project would be further than 1,000 feet from the nearest existing sensitive receptor, construction related impacts from localized TAC emissions would be **less than significant**. While operation of the proposed project would not result in emissions of TACs, proposed wood or pellet stoves in the tents would emit fine particulate matter (PM2.5). However off-site sensitive receptors would be located beyond a 1,000 feet zone of influence and thus localized impacts from operational PM2.5 concentrations would be less than significant. The proposed project would have a **less-than-significant** impact with regard to exposure of sensitive receptors to substantial pollutant concentrations.

e) There would be no odor sources installed as part of the proposed project. Toilets would be flush toilets and would discharge into the proposed septic system and leach field. Consequently, potential odor impacts would be **less than significant**.

References

Bay Area Air Quality Management District, 2017. California Environmental Quality Act Air Quality Guidelines. May, 2017. Available: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed July 18, 2018.

Tuolumne County Air Pollution Control District, 2013. CEQA Thresholds of Significance, July 11, 2013, Available: https://www.tuolumnecounty.ca.gov/DocumentCenter/View/1072/TCAPCD_Significance_Thresholds__2_?bidId=. Accessed July 18, 2018.

Biological Resources

Issues (and Supporting Information Sources):		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
4.	**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?	☐	☒	☐	☐
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 U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Affected Environment

Data Sources/Methodology

Biological resources within the project site were identified by an ESA biologist through field reconnaissance and an aquatic resources delineation conducted in June 2018. Prior to the surveys, a review of pertinent literature and database queries were conducted for the project site and surrounding area. The surveys were conducted on foot and existing habitat types, plants, and wildlife species within and adjacent to the project site were recorded. The biological surveys focused on identifying and delineating habitat for special-status plant and wildlife species, although general habitat conditions were noted and incidental species observations were recorded. A formal aquatic resource delineation was also conducted (ESA, 2018).

During the biological surveys, ESA biologists walked meandering transects through the entire project site, spaced closely to obtain maximum visual coverage of the habitats present. Habitats present at the project site were compared to the habitat requirements of the regionally occurring special-status species and used to determine which of these species had the potential to occur at or adjacent to the project site. Potentially jurisdictional wetlands and other waters of the U.S. were delineated according to methods outlined in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland*

Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE, 2010). Plant nomenclature follows *The Jepson Manual: Vascular Plants of California (Second Edition)* (Baldwin et al., 2012).

The primary sources of data referenced for this section include the following:

- United States Fish and Wildlife Service (USFWS) list of Federal Endangered and Threatened Species that occur in the project area (USFWS, 2018a) (see **Appendix C**);
- USFWS Critical Habitat for Threatened and Endangered Species (online mapping program) (USFWS, 2018b);
- California Natural Diversity Database (CNDDB), Rarefind 5 computer program (v5.2.14) (California Department of Fish and Wildlife [CDFW], 2018a) (see Appendix C);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (v8-03) (CNPS, 2018) (see Appendix C);
- CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW, 2018b);
- CDFW Special Animals List (CDFW, 2018c);
- *Yosemite Under Canvas Project Aquatic Resources Delineation* (ESA, 2019); and
- *Tuolumne County Wildlife Handbook* (Tuolumne County, 1987).

Regional Setting

Regionally, the project site is located in the central portion of the Sierra Nevada, within the central High Sierra Nevada district of the California Floristic Province (Baldwin et al., 2012). Regional natural plant communities in the vicinity of the properties include montane hardwood-conifer forests, mixed conifer forests, ponderosa pine forests, oak woodlands, riparian woodlands, perennial grasslands, wetlands, and riverine habitat. Within the project site plant communities include mixed conifer forest, seasonal wetland, seep, ephemeral drainage, and disturbed. Land use immediately surrounding the project site is characterized by open space, rural residences, and recreation facilities. Elevation in the project site ranges from 3,740 feet above mean sea level in the east to 4,050 feet above mean sea level in the west.

Project Site Setting

Plant Communities and Wildlife Habitats

Wildlife habitats are generally described in terms of dominant plant species and plant communities along with landform, disturbance regime, and other unique environmental characteristics. The wildlife habitats described in this section are based on the CDFW's *A Guide to Wildlife Habitats* (Mayer and Laudenslayer, 1988) that is used in CDFW's California Wildlife Habitat Relationships System. The California Wildlife Habitat Relationships (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly occurring birds, mammals, reptiles and amphibians.

Wildlife habitats generally correspond to plant communities. Plant communities are assemblages of plant species that occur together in the same area and are repeated across landscapes. Both

species composition and relative abundance define them. Plant communities within the project site were identified using field reconnaissance and aerial photography. Within CDFW's current vegetation classification system, vegetation alliances are the scientifically derived hierarchical class that corresponds best with plant communities and are designed to be the unit for conservation of rare or threatened plant communities (Sawyer et al., 2009). Vegetation alliances typically represent a much finer scale of vegetation description than wildlife habitats but correspond appropriately with one or several wildlife habitat types. CDFW provides crosswalks to help correlate vegetation alliances with wildlife habitats and the descriptions below make use of the crosswalk.

A description of each habitat type is presented below. Related vegetation alliances are listed following the wildlife habitat description and are based on the alliance descriptions presented by Sawyer et al. (2009).

Of note, the 2013 Rim Fire, which burned approximately 257,000 acres in Tuolumne and Mariposa counties, burned portions of the project site and surrounding area. The landscape is still recuperating from these fires and the much of the vegetation of the project area is still recovering.

Mixed Conifer

The majority of the project site consists of mixed conifer forest. Dominant overstory vegetation includes incense cedar (*Calocedrus decurrens*), ponderosa pine (*Pinus ponderosa*), white fir (*Abies concolor*), Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*), and black oak (*Quercus kelloggii*). Dominant shrubs include deer brush (*Ceanothus integerrimus*) and manzanita (*Arctostaphylos manzanita*). Dominant understory species includes blue grass (*Poa bulbosa*), ripgut grass (*Bromus diandrus*), sanicula (*Sanicula crassicaulis*), tall sock-destroyer (*Torilis arvensis*), silver hair grass (*Aira caryophyllea*), winter vetch (*Vicia villosa*), nemophila (*Nemophila heterophylla*), and Sierran gooseberry (*Ribes roezlii*).

Approximately 20.1 acres of the site were completely burned in 2013 during the Rim Fire. Burned trees and snags in these areas have been cleared. In addition to areas that were completely burned, individual trees and small stands of trees outside of those areas were also damaged or burned. Due to the recent wildfire history of the project site, much of the mixed conifer forest community in the project site is disturbed and does not support plant densities and diversity typical of undisturbed examples of this community type. Many trees within the project site were burned during the wildfires. Many saplings are found throughout the project site; unburned mature trees are located in healthy stands left untouched by the fire.

Vegetation Alliances

- *Pinus ponderosa – Calocedrus decurrens – Quercus kelloggii* (mixed conifer forest) Association

Disturbed

Disturbed habitat includes graded haul roads and a landing constructed for dead tree removal. The disturbed areas lack vegetation.

Vegetation Alliances

- *None*

Seasonal Wetland

A seasonal wetland occurs within the central portion of the project site. Dominant vegetation within the seasonal wetland consists entirely of small-fruited bulrush (*Scirpus microcarpus*).

Vegetation Alliances

- *Scirpus micorcarpus* (small-fruited bulrush marsh) Alliance

Seep

A seep occurs within the central portion of the project site. The seep receives groundwater from the surrounding land and drains to an ephemeral drainage. Dominant vegetation includes small-fruited bulrush and nutsedge (*Cyperus eragrostis*).

Vegetation Alliances

- *Scirpus micorcarpus* (small-fruited bulrush marsh) Alliance

Ephemeral Drainage

An ephemeral drainage system occurs within the project site, draining towards the southeast and eventually to the South Fork Tuolumne River, approximately 0.6 miles south of the project site. The main ephemeral drainage enters begins in the northwestern portion of the project site and extends east then southeast, exiting at the southeastern corner of the project site. A number of small ephemeral drainages drain to this main drainage. Dominant vegetation along the banks of the drainage includes mostly upland plant species including ponderosa pine, white fir, Brewer's bittercress (*Cardamine breweri*), lupine (*Lupinus* sp.), and bristly dogtail grass (*Cynosurus echinatus*).

Vegetation Alliances

- None

Aquatic Resources

Wetlands are ecologically complex habitats that support a variety of both plant and animal life. In a jurisdictional sense, the federal government defines wetlands in Section 404 of the Clean Water Act (CWA) as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3[b] and 40 CFR 230.3). Under normal circumstances, the federal definition of wetlands requires three wetland identification parameters be present: wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to other waters of the U.S (see definition below for "other waters of the U.S."). The U.S. Army Corps of Engineers (USACE) is the responsible agency for regulating wetlands under Section 404 of the CWA, while the U.S Environmental Protection Agency (EPA) has overall responsibility for the CWA. The CDFW does not normally have direct jurisdiction over wetlands unless they are subject to regulation under Streambed Alteration Agreements or they support state-listed endangered species; however, CDFW has trust responsibility for wildlife and habitats pursuant to California law.

"Other waters of the U.S." refers to those hydric features that are regulated by the CWA but are not wetlands (33 CFR 328.4). To be considered jurisdictional, these features must exhibit a defined bed and bank and an ordinary high-water mark. Examples of other waters of the U.S. include rivers, creeks, intermittent and ephemeral channels, ponds, and lakes.

An aquatic resources delineation was conducted for the project site by ESA in June 2018 and February 2019 (ESA, 2019). The aquatic resources delineation identified 0.725 acre of potentially jurisdictional wetlands within the project site that are expected to be subject to regulation under Section 404 of the CWA (see **Figure BIO-1**). Aquatic resources within the project site consist of seasonal wetland, seep, and ephemeral drainage. Aquatic community and habitat were classified using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin Classification) (Federal Geographic Data Committee, 2013). Potentially jurisdictional features within the project site are summarized in **Table BIO-1**. The aquatic resources delineation has not yet been verified by the USACE and should be considered preliminary until verification in writing is received from the USACE.

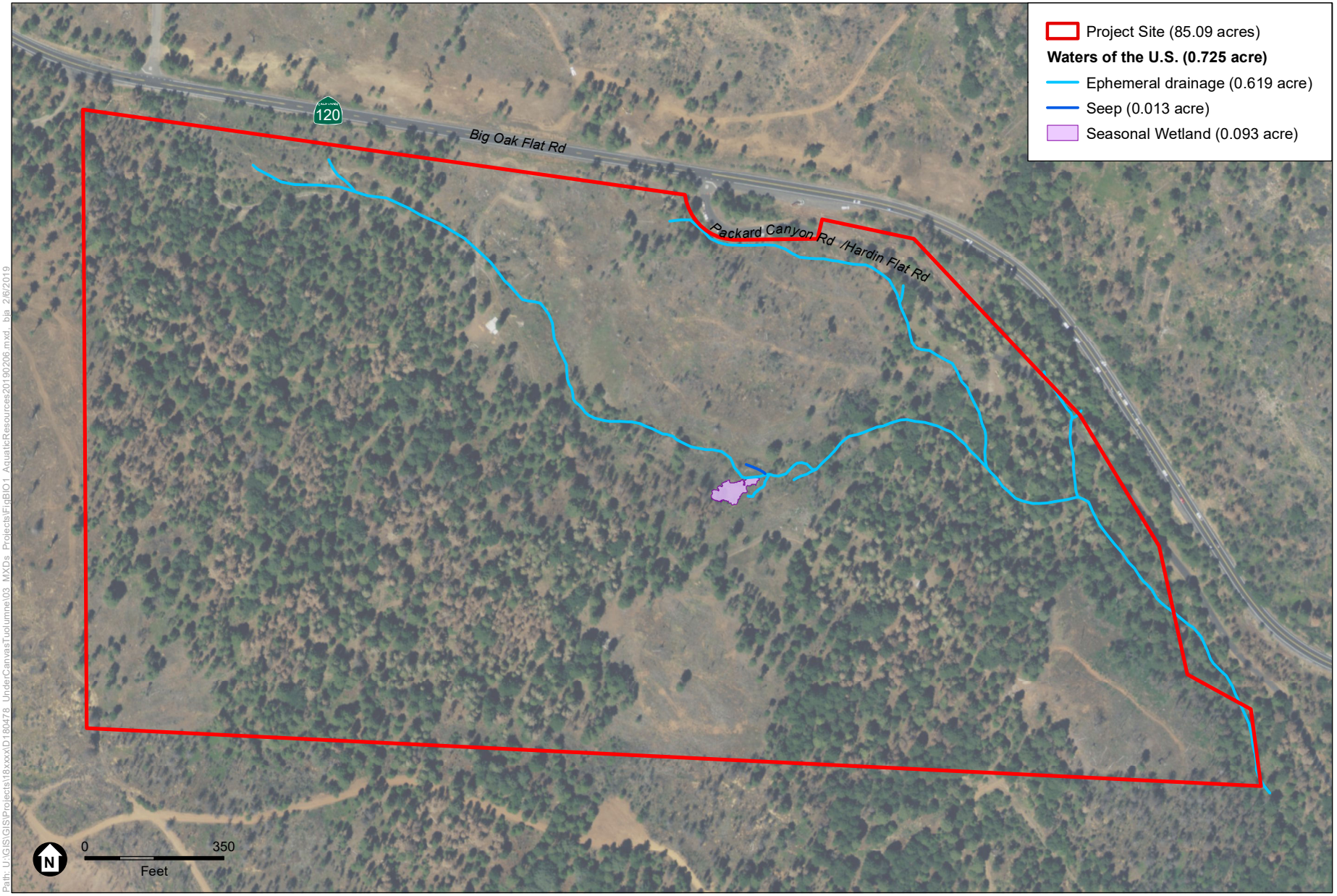
TABLE BIO-1
AQUATIC RESOURCES

Aquatic Resource Type – Cowardin Classification	Total Acres
Wetlands	
Seasonal Wetland	
Seasonal Wetland – Palustrine Emergent Wetland (Seasonally Flooded)	0.093
Seep	
Seep – Palustrine Emergent Wetland (Seasonally Flooded)	0.013
Other Waters of the U.S.	
Ephemeral Drainage	
Ephemeral Drainage – Riverine Intermittent	0.619
Total Area of Jurisdictional Features:	**0.725**

SOURCE: ESA, 2019

Seasonal Wetland (Palustrine Emergent Wetland – Seasonally Flooded)

Seasonal wetlands are ephemeral wetlands that pond water or remain saturated for extended periods during a portion of the year, often throughout the wet season, then dry up in spring or early summer. The seasonal wetland within the project site is classified as *Palustrine Emergent Wetland (Seasonally Flooded)* using the *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee, 2013). Dominant vegetation within the seasonal wetland consists entirely of small-fruited bulrush. Surface water was present in the seasonal wetland at the time of the field survey.



SOURCE: USDA, 2016; ESA, 2018

Yosemite Under Canvas Project

Figure BIO-1

Aquatic Resources

Seep (Palustrine Emergent Wetland – Seasonally Flooded)

Seeps are wet places where groundwater reaches the surface from an underground source, usually only during portions of the year. The seep in the project site is classified as *Palustrine Emergent Wetland (Seasonally Flooded)* using the *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee, 2013). The seep in the project site receives groundwater from the surrounding land and drains to the main ephemeral drainage. Dominant vegetation includes small-fruited bulrush and nutsedge (*Cyperus eragrostis*). Surface water was not present in the seep at the time of the field survey; however, a high water table was present as water was present in the soil pit at a depth of one inch.

Ephemeral Drainage/Riverine Intermittent

Ephemeral channels are classified as "riverine intermittent" using the *Classification of Wetlands and Deepwater Habitats of the United States* (Federal Geographic Data Committee, 2013). An ephemeral channel has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the only source of water for stream flow.

Sensitive Natural Community

A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, state, or federal agencies. Most sensitive natural communities are given special consideration because they perform important ecological functions, such as maintaining water quality and providing essential habitat for plants and wildlife. Some plant communities support a unique or diverse assemblage of plant species and therefore are considered sensitive from a botanical standpoint. CEQA may identify the elimination of such communities as a significant impact.

Sensitive natural communities include: a) areas of special concern to federal, state, or local resource agencies; b) areas regulated under Section 404 of the CWA; c) areas protected under Section 402 of the CWA; and d) areas protected under state and local regulations and policies. Habitat types on the project site that would be considered sensitive by regulatory agencies include wetlands and ephemeral drainages, which are regulated under Section 404 of the CWA.

The CDFW's *California Natural Community List* (CDFW, 2018d) ranks vegetation alliances in California according to their degree of rarity imperilment (as measured by rarity, trends, and threats). All alliances are listed with a G (global) and S (state) rank. Alliances with State ranks of S1-S3 are considered of special concern by the CDFW, and all associations within them are also considered to be highly imperiled. CDFW guidance recommends all alliances with State ranks of S1-S3 be considered and analyzed under CEQA.

Scirpus microcarpus (small-fruited bulrush) alliance, which occurs in the project site, has a state rank of S2 and is considered a sensitive natural community.

Wildlife Movement Corridors

Wildlife movement corridors are considered an important ecological resource by various agencies (CDFW and USFWS) and under CEQA. Movement corridors may provide favorable locations for wildlife to travel between different habitat areas such as foraging sites, breeding sites, cover areas, and preferred summer and winter range locations. They may also function as dispersal corridors allowing animals to move between various locations within their range. Topography and other natural factors, in combination with urbanization, can fragment or separate large open-space areas. Areas of human disturbance or urban development can fragment wildlife habitats and impede wildlife movement between areas of suitable habitat. This fragmentation creates isolated "islands" of vegetation that may not provide sufficient area to accommodate sustainable populations, and can adversely affect genetic and species diversity. Movement corridors mitigate the effects of this fragmentation by allowing animals to move between remaining habitats, which in turn allows depleted populations to be replenished and promotes genetic exchange between separate populations.

The project area could potentially be used by a variety of wildlife species for dispersal and seasonal migration, including black-tailed deer (*Odocoileus hemionus columbianus*).

Special-Status Species

Special-status species are legally protected under the state and federal Endangered Species Acts or other regulations or are species that are considered sufficiently rare by the scientific community to qualify for such listing. These species are classified under the following categories:

1. Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (50 Code of Federal regulations [CFR] 17.12 [listed plants], 17.11 [listed animals] and various notices in the Federal Register [FR] [proposed species]);

2. Species that are candidates for possible future listing as threatened or endangered under the federal Endangered Species Act (61 FR 40, February 28, 1996);

3. Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (14 California Code of Regulations [CCR] 670.5);

4. Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.);

5. Animal species of special concern to CDFW;

6. Animals fully protected under Fish and Game Code (California Fish and Game Code, Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);

7. Species that meet the definitions of rare and endangered under CEQA. CEQA Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists (State CEQA Guidelines, Section 15380); and

8. Plants considered under the CNPS and CDFW to be "rare, threatened or endangered in California" (California Rare Plant Rank [CRPR] 1A, 1B, and 2 in CNPS, 2018).

A list of special-status species that have the potential to occur within the vicinity of the project site was compiled based on data contained in the CNDDB (CDFW, 2018a), the USFWS list of Federal

Endangered and Threatened Species that Occur in or may be Affected by the proposed project (USFWS, 2018a), and the CNPS Inventory of Rare and Endangered Plants (CNPS, 2018). A list of special-status species, their general habitat requirements, and an assessment of their potential to occur within and adjacent to the project site is provided below in **Table BIO-2**.

The "Potential to Occur" categories are defined as follows:

- **Unlikely**: The project site does not support suitable habitat for a particular species and/or the project site is outside of the species known range.
- **Low Potential**: The project site only provides limited and low quality habitat for a particular species. In addition, the known range for a particular species may be outside of the immediate project area.
- **Medium Potential**: The project site and/or immediate project area provides suitable habitat for a particular species.
- **High Potential**: The project site and/or immediate project area provide ideal habitat conditions for a particular species and/or known populations occur in the immediate project area or within the project site.

TABLE BIO-2
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

Scientific Name **Common Name**	**Listing Status USFWS/ CDFW/CNPS**	**General Habitat**	**Potential to Occur in the Project Area**
Fish			
Hypomesus transpacificus Delta smelt	FT/SE/--	Found in the Sacramento-San Joaquin delta, Suisun Bay, Carquinez Strait, and San Pablo Bay.	Unlikely. No suitable habitat within the project site. Project site outside of geographic range.
Amphibians			
Anaxyrus canorus Yosemite toad	FT/CSC/--	In the vicinity of wet meadows in the central High Sierra, 6,400 to 11,300 feet in elevation. Primarily montane wet meadows; also in seasonal ponds associated with Lodgepole pine and subalpine conifer forest.	Unlikely. No suitable habitat within the project site. Project site outside of elevation range of the species.
Hydromantes brunus limestone salamander	--/ST,CFP/--	Limestone outcrops in foothill-pine-chaparral belt along the Merced River and its tributaries, from 800 to 2,600 feet in elevation. California buckeye (*Aesculus californica*) is an indicator of optimal habitat. Seeks cover in limestone caverns, talus, rock fissures, and surface objects.	Unlikely. No suitable habitat within the project site. Project site outside of elevation range of the species.
Rana boylii Foothill yellow-legged frog	--/SCT,CSC/--	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying.	Unlikely. No suitable habitat within the project site. Drainages on-site are ephemeral, seasonally dry, and have no in-stream vegetation to provide cover and breeding habitat.

TABLE BIO-2
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

Scientific Name **Common Name**	**Listing Status USFWS/ CDFW/CNPS**	**General Habitat**	**Potential to Occur in the Project Area**
Rana draytonii California red-legged frog	FT/CSC/--	Breeds in slow moving streams, ponds, and marshes with emergent vegetation and an absence or low occurrence of predators.	Unlikely. No suitable habitat within the project site. Drainages on-site are ephemeral, seasonally dry, and have no in-stream vegetation to provide cover and breeding habitat.
Rana sierrae Sierra Nevada yellow-legged frog	FE/ST/--	Streams, lakes, and ponds in montane riparian habitats. Always encountered within a few feet of water. Tadpoles may require 2–4 years to complete their aquatic development.	Unlikely. No suitable habitat within the project site. Perennial water features are not present within the project site.
Reptiles			
Emys marmorata western pond turtle	--/CSC/--	Ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat for egg-laying. Nest sites most often characterized as having gentle slopes (<15%) with little vegetation or sandy banks.	Unlikely. No suitable habitat within the project site. Perennial water features are not present within the project site.
Birds			
Accipiter gentilis northern goshawk	--/CSC/--	Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.	**Medium.** The project site provides suitable habitat for this species.
Empidonax traillii willow flycatcher	--/SE/--	Inhabits extensive thickets of low, dense willows (Salix spp.) on edge of wet meadows, ponds, or backwaters, from 2,000 to 8,000 feet. Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	Unlikely. No suitable habitat within the project site.
Falco peregrinus anatum American peregrine falcon	--/CFP/--	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, and mounds as well as human-made structures. Nest consists of a scrape or depression or ledge in an open site.	Unlikely. No suitable habitat within the project site.
Haliaeetus leucocephalus Bald eagle	BEPA/ SE,CFP/--	Found at lakes, reservoirs, river systems, and coastal wetlands. The breeding range is generally in mountainous areas near lake or river margins, where they find large trees (usually conifers) with open branches for nesting.	Low. The South Fork Tuolumne River is approximately 0.6 mile south of the project site. Marginal nesting trees within the project site.

TABLE BIO-2
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

Scientific Name **Common Name**	**Listing Status USFWS/ CDFW/CNPS**	**General Habitat**	**Potential to Occur in the Project Area**
Strix nebulosa great gray owl	--/SE/--	Occurs within old growth red-fir, mixed conifer, and lodgepole pine habitats above 4,500 feet. Most occurrences along the Tuolumne River and the Merced River in Yosemite Valley. Requires large diameter snags in a forest with high canopy closure, which provide a cool sub-canopy micro-climate.	Unlikely. No suitable habitat within the project site.
Strix occidentalis occidentalis California spotted owl	--/CSC/--	Mixed conifer forest, often with an understory of black oaks and other deciduous hardwoods. Canopy closure greater than 40%. Most often found in deep-shaded canyons, on north-facing slopes, and within 300 meters of water.	**Medium.** The project site provides suitable habitat for this species.
Mammals			
Antrozous pallidus Pallid bat	--/CSC/--	A wide variety of habitats is occupied, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting. Roosts in buildings, caves, tree hollows, crevices, mines, and bridges.	**Medium**. Mature trees in the project site may provide suitable roosting habitat, and open areas within and adjacent to the project site provide suitable foraging habitat.
Aplodontia rufa californica Sierra Nevada mountain beaver	--/CSC/--	Dense growth of small deciduous trees and shrubs, wet soil, and an abundance of forbs in the Sierra Nevada and east slope. Needs dense understory for food and cover. Burrows into soft soil. Needs abundant supply of water.	Unlikely. No suitable habitat within the project site.
Corynorhinus townsendii Townsend's big-eared bat	--/CSC/--	Found throughout California in a wide variety of habitats. Roost in caves, mines, tunnels with minimal disturbance but can also be found in abandoned open buildings or other human made structures. Extremely sensitive to human disturbance.	Unlikely. No suitable habitat within the project site.
Euderma maculatum spotted bat	--/CSC/--	Forages over water and along washes within a wide variety of habitats including grasslands, deserts, and mixed conifer forests. Roosts on rock crevices in caves or on cliffs.	**Medium**. Suitable foraging habitat present within the project site. Suitable roost sites are absent.
Eumops perotis californicus western mastiff bat	--/CSC/--	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral etc. Isolated occurrences in northern California. Roosts primarily in crevices within cliffs and canyons, occasionally in buildings. Primarily feeds on moths. Maternity colonies active May through July.	**Medium**. Suitable foraging habitat present within the project site. Suitable roost sites are absent.

TABLE BIO-2
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

Scientific Name **Common Name**	**Listing Status USFWS/ CDFW/CNPS**	**General Habitat**	**Potential to Occur in the Project Area**
Lasiurus blossevillii western red bat	--/CSC/--	Forages in a wide range of habitats but prefers habitat edges and mosaics with large trees that have open understories. Roosts primarily in trees.	**Medium**. Suitable roosting habitat is present in the mixed conifer forest. Suitable foraging habitat is present in areas of open understory of mixed conifer forest.
Pekania pennanti fisher – West Coast DPS	--/ST,CSC/--	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs, and rocky areas for cover and denning. Needs large areas of mature dense forest.	Unlikely. No suitable habitat within the project site.
Vulpes vulpes necator Sierra Nevada red fox	FC/ST/--	Historically found from the Cascades down to the Sierra Nevada. Found in a variety of habitats from wet meadows to forested areas. Use dense vegetation and rocky areas for cover and den sites. Prefer forests interspersed with meadows or alpine fell-fields.	Unlikely. No suitable habitat within the project site.
Plants			
Agrostis humilis mountain bent grass	--/--/2B.3	Meadows, seeps, and alpine boulder and rock fields in subalpine coniferous forest. Sometimes on carbonate soils. 8,750 – 10,500 feet. Blooms July to September.	Unlikely. No suitable habitat within the project site. Project site outside of elevation range of the species.
Allium tribracteatum three-bracted onion	--/--/1B.2	Volcanic slopes in coniferous forest and chaparral. 3,600 – 9,850 feet. Blooms April to August.	Unlikely. No suitable habitat within the project site.
Allium yosemitense Yosemite onion	--/--/1B.3	Rocky, metamorphic, or granitic soils in broadleafed upland forest, chaparral, cismontane woodland, and lower montane coniferous forest. 1,750 – 7,200 feet. Blooms April to July.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Balsamorhiza macrolepis big-scale balsamroot	--/--/1B.2	Open grassy or rocky slopes in chaparral, cismontane woodland, and grasslands. Often on serpentine soils. 295 – 5,085 feet. Blooms March to June.	Unlikely. No suitable habitat within the project site.
Brasenia schreberi watershield	--/--/2B.3	Freshwater marshes and swamps. 100 – 7,200 feet. Blooms June to September.	Unlikely. No suitable habitat within the project site.
Carex limosa med sedge	--/--/2B.2	Freshwater bogs, fens, marshes, swamps, meadows, and seeps in montane coniferous forest. 3,900 8,850 feet. Blooms June to August.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Carex viridula subsp. *virdula* green yellow sedge	--/--/2B.3	Freshwater bogs, fens, marshes, and swamps. Also found in North Coast mesic forests. 0 – 5,250 feet. Blooms June to November.	Unlikely. No suitable habitat within the project site.

TABLE BIO-2
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

Scientific Name **Common Name**	**Listing Status USFWS/ CDFW/CNPS**	**General Habitat**	**Potential to Occur in the Project Area**
Cinna bolanderi Bolander's woodreed	--/--/1B.2	Streambanks and other mesic sites such as meadows and seeps in upper montane coniferous forest. 5,500 – 8,000 feet. Blooms July to September.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Clarkia australis Small's southern clarkia	--/--/1B.2	Open, rocky sites in Sierra Nevada yellow pine forest. 2,625 – 6,800 ft. Blooms May to August.	Unlikely. No suitable habitat within the project site.
Clarkia biloba subsp. *australis* mountain bent grass	--/--/1B.2	Chaparral and woodlands of the Sierra Nevada Foothills. Sometimes on serpentine. 985 – 4,790 ft. Blooms May to July.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Clarkia lingulata Mariposa clarkia	--/--/1B.1	Chaparral and cismontane woodland. 1,300 – 1,500 feet. Blooms May to June.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Diplacus pulchellus yellow-lip pansyflower	--/--/1B.2	Vernally mesic, often disturbed sites on clay soils. Meadows and seeps within lower montane coniferous forest. 2,000 – 6,500 feet. Blooms April to June.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Eriophyllum congdonii Congdon's woolly sunflower	--/--/1B.2	Rocky, metamorphic soils in chaparral, cismontane woodland, lower montane coniferous forest, and grasslands. 1,650 – 6,250 feet. Blooms April to June.	Unlikely. No suitable habitat within the project site.
Eriophyllum nubigenum Yosemite woolly sunflower	--/--/1B.3	Gravelly, granitic soils in chaparral and montane coniferous forest. 5,000 – 9,000 feet. Blooms May to August.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Erythranthe filicaulis slender-stemmed monkeyflower	--/--/1B.2	Vernally mesic sites such as meadows and seeps in woodland and coniferous forest. 2,950 – 5,750 feet. Blooms April to August.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Erythronium taylorii Pilot Ridge fawn lily	--/--/1B.2	Metamorphic, rocky soils on cliffs in lower montane coniferous forest. 4,400 – 4,600 feet. Blooms April to May.	Unlikely. No suitable habitat within the project site.
Erythronium tuolumnense Tuolumne fawn lily	--/--/1B.2	Broadleaf upland forests, chaparral, cismontane woodland, coniferous forests 1,675 – 4,475 feet. Flowering period: Mar–June.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Horkelia parryi Parry's horkelia	--/--/1B.2	Open chaparral on Ione formation and limestone soils. 260 – 3,510 feet. Blooms April–September.	Unlikely. No suitable habitat within the project site.

TABLE BIO-2
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

Scientific Name **Common Name**	**Listing Status USFWS/ CDFW/CNPS**	**General Habitat**	**Potential to Occur in the Project Area**
Hulsea brevifolia short-leaved hulsea	--/--/1B.2	Granitic, volcanic, gravelly, or sandy soils in coniferous forest. 4,900 – 10,500 feet. Blooms May to August.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Lewisia congdonii Congond's lomatium	--/--/1B.2	Granitic and metamorphic soils on rocky, mesic sites in chaparral, woodland, coniferous forest, and grassland. 1,650 – 9,200 feet. Blooms April to June.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Lomatium congdonii Congdon's lomatium	--/--/1B.2	Serpentine soil in chaparral, cismontane woodland. 985 – 6,890 feet. Blooms Mar-Jun.	Unlikely. No suitable habitat within the project site.
Lupinus spectabilis shaggyhair lupine	--/--/1B.2	Serpentine soil in chaparral and woodland of the Sierra Nevada foothills. 855 – 2,700 ft. Blooms Apr-May.	Unlikely. No suitable habitat within the project site.
Mielichhoferia elongata Shevock's copper moss	--/--/1B.2	Found on metamorphic rock, usually acidic, usually vernally mesic, sometimes carbonate. 0 – 6,450 feet.	Unlikely. No suitable habitat within the project site.
Orthotrichum holzingeri Holzinger's orthotrichum moss	--/--/1B.3	Usually on rocks in and along streams, rarely on tree limbs. 2,350 – 5,900 feet.	Unlikely. No suitable habitat within the project site.
Plagiobothrys torreyi var. *torreyi* Yosemite popcornflower	--/--/1B.2	Meadows and seeps in lower montane coniferous forest. 3,950 – 4,500 feet. Blooms April to June.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Potamogeton epihydrus Nuttall's ribbon-leaved pondweed	--/--/2B.2	Marshes and swamps and assorted shallow freshwater habitats. 1,200 – 7,125 feet. Blooms June to September.	Unlikely. No suitable habitat within the project site.
Potamogeton robbinsii Robbin's pondweed	--/--/2B.3	Deep water in lakes, marshes, and swamps. 5,000 – 10,800 feet. Blooms July to August.	Unlikely. No suitable habitat within the project site.
Rhynchospora californica California beaked rush	--/--/1B.1	Bogs, fens, marshes, swamps, meadows, and seeps in coniferous forests. 150 – 3,300 feet. Blooms May to July.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Rhynchospora capitellata brownish beaked rush	--/--/2B.2	Mesic sites such as meadows, seeps, marshes, and swamps in coniferous forest. 150 – 6,500 feet. Blooms July to August.	**Medium**. Suitable habitat is present within the project site. However, species not observed during biological surveys conducted in 2018.
Schoenoplectus subterminalis water bulrush	--/--/2B.3	Montane lake margins. 2,450 – 7,400 feet. Blooms June to September.	Unlikely. No suitable habitat within the project site.

TABLE BIO-2
REGIONALLY OCCURRING SPECIAL-STATUS SPECIES

Scientific Name Common Name	Listing Status USFWS/ CDFW/CNPS	General Habitat	Potential to Occur in the Project Area

STATUS CODES:

FEDERAL (U.S. Fish and Wildlife Service):
BEPA = Bald Eagle Protection Act
FE = Listed as Endangered by the Federal Government
FT = Listed as Threatened by the Federal Government
FC = Candidate for Federal Listing

STATE (California Department of Fish and Wildlife):
SE = Listed as Endangered by the State of California
ST = Listed as Threatened by the State of California
SCT = Candidate for State Listing (Threatened)
CSC = California species of special concern
CFP = California fully protected bird species

California Native Plant Society (CNPS):
Rank 1A = Plants presumed extirpated in California and either rare or extinct elsewhere
Rank 1B = Plants rare, threatened, or endangered in California and elsewhere
Rank 2A = Plants presumed extirpated in California but common elsewhere
Rank 2B = Plants rare, threatened, or endangered in California but more common elsewhere
Rank 3 = Plants about which more information is needed
Rank 4 = Plants of limited distribution

CNPS Code Extensions
.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 = Fairly threatened in California (20-80% occurrences threatened)
.3 = Not very threatened in California (less than 20% of occurrences threatened or no current threats known)

SOURCE: CNPS, 2018; CDFW, 2018a; USFWS, 2018a

Critical Habitat

Critical habitat is defined in Section 3(5)A of the Federal Endangered Species Act as the specific portions of the geographic area occupied by the species in which physical or biological features essential to the conservation of the species are found and that may require special management considerations or protection. Specific areas outside of the geographic area occupied by the species may also be included in critical habitat designations upon a determination that such areas are essential for the conservation of the species.

There is no critical habitat designated within or adjacent to the project site.

Discussion

a) Special-status species and their habitats that may be affected either directly or indirectly through implementation of the proposed project include special-status bats, nesting raptors and migratory birds, and special-status plant species. Each of these potentially affected species is described below.

Nesting Raptors and Migratory Birds

Under the Migratory Bird Treaty Act (MBTA), migratory bird species and their nests and eggs are protected from injury or death. California Fish and Game Code Subsections 3503, 3503.5, and 3800 prohibit the possession, incidental take, or needless destruction of birds, their nests, and eggs.

The project site and the immediate vicinity have the potential to support nesting raptors, including northern goshawk and California spotted owl, as well as migratory birds on suitable nest trees. Direct impacts on nesting raptors or migratory birds or their habitat such as removal of trees could result in substantial lowered reproductive success or habitat loss, thereby potentially adversely affecting local population levels. The raptor or bird species could be adversely affected if active nesting, roosting, or foraging sites are either removed or exposed to a substantial increase in noise or human presence during project activities. The impact would be less than significant if construction activities occur during the non-breeding season (i.e., from September 1st through January 31st). However, construction activities conducted during the breeding season between February 1st and August 31st could affect the species adversely and result in a potentially significant impact. Implementation of **Mitigation Measure BIO-1** would mitigate the impact to **less than significant**.

Special-Status Bats

Forest habitats within the project site provide suitable roosting and foraging habitat for special-status bat species, including pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum*), western mastiff bat (*Eumops perotis californicus*), and western red bat (*Lasiurus blossevillii*). These and other bat species could use trees with suitable cavities, crevices, exfoliating bark and/or bark fissures on and near the project site for roosting. The proposed project could result in the removal of trees potentially used for roosting by special-status bats or other modifications to bat habitat. In addition, construction-related activities would temporarily elevate noise levels in areas on and surrounding the construction zone. Special-status bat species may be adversely affected if roosting sites are physically disturbed or are exposed to a substantial increase in noise or human presence during project activities. If construction activities occur during the bat breeding season (April 1st to August 31st), disturbance to roosting sites could have a significant effect on special-status bat species if active maternity roosts are present. Because project implementation could adversely affect these species, this impact would be considered potentially significant. Implementation of pre-construction surveys consistent with **Mitigation Measure BIO-2** will reduce potential impacts to special-status bats to **less than significant**.

Special-Status Plants

Suitable habitat for a number of special-status plants occurs on the project site. Based on surveys conducted on the project site, a review of available databases and literature, and an on-site habitat suitability assessment, 14 special-status plant species were determined to have the potential to occur on the project site (see Table BIO-2). The reconnaissance-level survey conducted for this project did not record the presence of any special-status plant species; however, this survey does not constitute a full botanical inventory of the site and does not meet the requirements outlined in the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW, 2018e). Therefore, it is not known whether the project site supports any special-status plant species. Implementation of the proposed project could potentially result in direct or indirect impacts to special-status plant populations if they are located on the

project site. **Mitigation Measure BIO-3** will reduce potential impacts to special-status plants to **less than significant**.

b) The project site supports wetlands and other waters of the U.S., habitat types that are considered to be a sensitive natural community by CDFW and USACE. As designed, the proposed project will not result in any direct impacts to these communities. However, the proposed access roadway will require a crossing of two ephemeral drainages. The proposed access roadway will completely span both of these drainages, avoiding any direct impacts within the ordinary high water mark. However, the construction and use of the spans could result in indirect impacts to the drainages including increased erosion potential and shading. As discussed in the Project Description (see Table 4), Under Canvas will obtain a Streambed Alternation Agreement from CDFW for the proposed crossings of ephemeral drainages and implement all measures outlined in the agreement. In addition, implementation of **Mitigation Measure HYDRO-1** (see Hydrology and Water Quality section) will reduce potential indirect impacts to sensitive natural communities to **less than significant**.

c) The project site supports wetlands and other waters of the U.S. subject to USACE jurisdiction under Section 404 of the CWA. However, as proposed the project will not impact these features. Additionally, much of the areas subject to USACE jurisdiction under Section 404 of the CWA will be conserved with Open Space zoning. Therefore, there would be a **less-than-significant** impact to aquatic features under the jurisdiction of the USACE under Section 404 of the CWA.

d) The project site is located in the central Sierra Nevada mountain range, which is an important wildlife migration corridor for a variety of common and special-status species. Project site habitats may potentially function as a migration corridor for a variety of terrestrial species. While some local disturbance would occur in the project site as a result of project construction, these activities would be limited to a small area. They are not expected to interfere with any movement corridors or the movement of any wildlife or native resident or migratory fish species through the area. In addition, similar habitat types are abundant in the local area. Therefore, impacts would be **less than significant**.

e) Mature oak trees are protected in rural Tuolumne County according to Chapter 9.24 of the Tuolumne County Ordinance Code entitled "Premature Removal of Oak Trees." This ordinance affords protection to any "old growth" oak trees ("old growth" denotes any native oak tree that is 24" or greater diameter at breast height [DBH]); any valley oak (*Quercus lobata*) 5" or greater DBH; or protection against any removal of native oak trees resulting in a 10% or more average decrease in native oak canopy cover within an oak woodland. Protection is granted as well within the existing Tuolumne County General Plan Policy 4.J.a and the Tuolumne County Wildlife Handbook, describing that a project would have a significant impact on biological resources if it resulted in a net loss of the habitat value of a Second Priority Habitat. Although black oak trees occur sporadically throughout the project site, no oak trees or oak woodland areas protected under the Tuolumne County Ordinance Code, the Tuolumne County General Plan, or the Tuolumne County Wildlife

Handbook would be removed by implementation of the project. Therefore, there would be **no impact**.

f) The proposed project is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, there would be **no impact**.

Mitigation Measures

Mitigation Measure BIO-1: Perform Pre-Construction Surveys for Nesting Special-Status and Common Migratory Birds. For construction activities expected to occur during the nesting season of raptors (February 1 to August 31) and migratory birds, a pre-construction survey shall be conducted to determine if active nests are present on or within 500 feet of the project site where feasible. Areas that are inaccessible due to private property restrictions shall be surveyed using binoculars from the nearest vantage point. The survey shall be conducted by a qualified biologist no more than seven days prior to the onset of construction. If no active nests are identified during the pre-construction survey, no further mitigation is necessary. If construction activities begin prior to February 1, it is assumed that no birds will nest in the project site during active construction activities and no pre-construction surveys are required. If at any time during the nesting season construction stops for a period of two weeks or longer, pre-construction surveys shall be conducted prior to construction resuming.

If active nests are found on or within 500 feet of the project site, then Under Canvas shall notify CDFW and explain any additional measures that a qualified biologist plans to implement to prevent or minimize disturbance to the nest while it is still active. Depending on the conditions specific to each nest, and the relative location and rate of construction activities, it may be feasible for construction to occur as planned within the 500-foot buffer without impacting the breeding effort. Appropriate measures may include restricting construction activities within 500 feet of active raptor nests, and having a qualified biologist with stop work authority monitor the nest for evidence that the behavior of the parents have changed during construction. Nests that are inaccessible due to private property restrictions shall be monitored using binoculars from the nearest vantage point. Appropriate measures would be implemented until the young have fledged or until a qualified biologist determines that the nest is no longer active. Construction activities may be halted at any time if, in the professional opinion of the biologist, construction activities are affecting the breeding effort.

Mitigation Measure BIO-2: Perform Pre-Construction Surveys for Special-Status Bats. For construction activities expected to occur during the breeding season of special-status bat species (April 1 to August 31), a field survey shall be conducted by a qualified biologist to determine whether active roosts are present on-site or within 100 feet of the project boundaries. Field surveys shall be conducted early in the breeding season before any construction activities begin, when bats are establishing maternity roosts but before pregnant females give birth (April through early May). If no roosting bats are found, then no further mitigation is required. If roosting bats are found, then disturbance of the maternity roosts shall be avoided by halting construction until the end of the breeding season or a qualified bat biologist excludes the roosting bats in consultation with CDFW. If construction activities begin prior to April 1, it is assumed that no bats will roost in the project site during active construction activities and no pre-construction surveys are required. If at any time during the roosting season construction stops for a period of two

weeks or longer, pre-construction surveys shall be conducted prior to construction resuming.

Mitigation Measure BIO-3: Perform Pre-Construction Surveys for Special-Status Plants. A qualified plant biologist shall conduct a pre-construction survey in the appropriate season(s) for the plant species identified as having a medium to high potential to occur within the construction disturbance area (see Table BIO-2). If special-status plant species are found, Under Canvas shall consult with CDFW to provide preservation and avoidance measures commensurate with the standards provided in applicable CDFW protocols for the affected species. The preservation and avoidance measures may include appropriate buffer areas clearly marked during project activities, monitoring by a qualified plant biologist, the evaluation of relocating project facilities that would impact special-status plant species populations, the evaluation of Open Space zoning to protect special-status plant species populations, and the development and implementation of a replanting plan (collection of seeds, revegetation, and management and monitoring of the habitat to ensure success) for any individuals of the species that cannot be avoided.

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Cultural Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐
d) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074	☐	☒	☐	☐

Environmental Setting

Background Research

ESA staff conducted a review of online maps and aerial photography and reviewed literature in ESA's Northern California cultural resources library. Staff members at the Central California Information Center (CCIC) of the California Historical Resources Information System at California State University Stanislaus conducted a records search on June 1, 2018 (File No. 10723-O). The review included the project site and a 0.5-mile radius. Previous surveys, studies, and site records were accessed. Records were also reviewed in the Historic Property Data File that contains information on sites of recognized historical significance including those evaluated for listing in the National Register of Historic Places, the California Register of Historical Resources (California Register), the California Inventory of Historical Resources, California Historical Landmarks, and California Points of Historical Interest. CCIC records indicate that two built environment historic-period resources have been previously recorded within 0.5 miles of the project site, but none within the project site.

The Golden Rock Water Ditch (CA-TUO-001751H) is a historic-era water supply ditch constructed between 1855 and 1860 that diverted part of the South Fork Tuolumne River to serve mining, irrigation, and drinking water needs for the district, and is located approximately 0.5 miles south of the project site. Big Oak Flat Road (CA-TUO-003146H) was originally constructed in the 1870s and is located adjacent to the northern boundary of the project site.

Results of the CCIC records search also identified five previously recorded archaeological resources within 0.5 mile of the project site, none of which are in the project site. One of these resources, P-55-007892, was recorded approximately 250 feet southwest of the project site and is a dirt roadbed of indeterminate age. The four other resources consist of: P-41-000307 (CA-TUO-3554/H), a multi-component archaeological site containing a Native American obsidian and chert lithic scatter and a historic-era glass and ceramic scatter located approximately 0.25 miles southeast of the project site; P-41-002574 (CA-TUO-1583), a Native American archaeological site consisting of two bedrock mortar outcrops located 0.5 miles north of the project site; P-41-002579 (CA-TUO-1588), a Native American archaeological site containing bedrock mortars, obsidian lithic artifacts,

and two steatite artifacts located 0.5 miles northwest of the project site; and P-41-007893 (CA-TUO-5067), a Native American archaeological site containing bedrock mortars, obsidian lithic artifacts, and groundstone artifacts located 0.2 miles northeast of the project site. Additionally, the CCIC has record of 29 previous cultural resources studies that have been conducted within 0.5 mile of the project site. Two of these studies included small portions of the project site.

None of the ethnographic literature reviewed for this project described or depicted any ethnographic place names in or in close proximity to the project site. Levy (1978: Fig 2) depicts the closest place names as *Pigliku* and *Sala*, approximately 10 miles west of the project site in the vicinity of Groveland.

On May 30, 2018, ESA contacted the Native American Heritage Commission (NAHC) by email to request a records search of their Sacred Lands File (SLF) and a list of Native American representatives with cultural affiliation to the project area and vicinity. ESA received a response from the NAHC on June 14, 2018 stating that the SLF has no record of any resources in the project site. The reply also included a list of two Native American representatives affiliated with the project area. The County is currently conducting outreach to relevant California Native American tribes, pursuant to PRC § 21080.3.1.

Cultural Survey

On June 11, 2018, an ESA archaeologist conducted an archaeological pedestrian survey of the project site. Intensive pedestrian survey methods were used, consisting of walking parallel transects and inspecting the surface for cultural material or evidence thereof. Transects were spaced no more than 10-15 meters apart in areas subject to proposed project ground disturbance; transects in portions of the project site not subject to ground disturbance were spaced at 30-meter intervals. Due to the steep terrain, transects were oriented perpendicular to slope. Where present, flat areas, drainages, and bedrock outcrops were subjected to more intensive scrutiny.

A modern, unfinished cabin and a modern woodshed were observed within the project site, but no historic-period built environment resources were identified within the project site as a result of the field survey.

Two potentially historic-period roads were identified during survey. The first road is a dirt track accessed from Big Oak Flat Road north of the project site across from Forest Route 1S03. The dirt track proceeds from the northwestern corner of the project site in a southeasterly direction approximately 2,000 feet along the southern bank of a stream drainage. The road serves as access for the modern woodshed and has been used for logging access after the 2013 Rim Fire. The dirt track is first recorded on a 1990 U.S. Geological Survey (USGS) topographic map (USGS, 1990) and does not appear on earlier maps or aerial photographs.

The second road identified during the survey is an overgrown road cut originating near the center of the project site that proceeds downslope north-northeast along the east bank of an intermittent drainage and connects with the dirt track near the modern wood shed. The road cut is approximately 700 feet long, 10-12 feet wide at the base, 14-16 feet wide at the top of the cut, and 16-32 inches deep. Several runoff control swale-and-berm water bars cross the road cut at oblique angles, spaced

irregularly and oriented to deliver stormwater into the intermittent drainage to the west. No information regarding the construction date or purpose of the road cut segment was identified during the study. The road does not appear on any historic topographic maps or aerial photographs.

Discussion

a) A significant impact would occur if the project could cause a substantial adverse change to a historical resource, herein referring to historic-period architectural resources or the built environment, including buildings, structures, and objects. A substantial adverse change includes the physical demolition, destruction, relocation, or alteration of the resource.

Staff members at the CCIC of the California Historical Resources Information System at California State University Stanislaus conducted a records search on June 1, 2018 (File No. 10723-O). As discussed above, two built environment historic-period resources were previously recorded within 0.5 miles of the project site, but none are within the project site.

A modern, unfinished cabin and a modern woodshed were observed within the project site during a site visit conducted on June 11, 2018, but no historical resources were identified within the project site as a result of the background research and field survey. As the project would not affect any significant historic-period buildings or structures, the project would have **no impact** on historical resources and no mitigation is required.

b) A significant impact would occur if the project could cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

As discussed above under the Environmental Setting, results of the CCIC records search on June 1, 2018 (File No. 10723-O) identified five previously recorded cultural resources within 0.5 mile of the project site, none of which are in the project site. Additionally, the CCIC has record of two previous cultural resources studies that have been conducted within 0.5 mile of the project site. Two of these studies included small portions of the project site.

On June 11, 2018, an ESA archaeologist conducted an archaeological pedestrian survey of the project site. Two potentially historic-period roads were identified during survey. The first road is a dirt track accessed from Big Oak Flat Road north of the project site across from Forest Route 1S03. The dirt track is first recorded on a 1990 U.S. Geological Survey (USGS) topographic map (USGS, 1990) and does not appear on earlier maps or aerial photographs. Accordingly, the road is likely ineligible for listing as an individual historical resource, as defined by CEQA; it does not appear to meet the criteria for listing in the California Register. The dirt track does not appear to be associated with an important event (Criterion 1) or significant person (Criterion 2), nor does the road represent a distinctive method or type of construction (Criterion 3) or is likely to yield data important to history (Criterion 4).

The second road identified during the survey is an overgrown road cut originating near the center of the project site that proceeds downslope north-northeast along the east bank of an

intermittent drainage and connects with the dirt track near the modern wood shed. No information regarding the construction date or purpose of the road cut segment was identified during the study. The road does not appear on any historic topographic maps or aerial photographs. Accordingly, the road cut is likely ineligible for listing as an individual historical resource, as defined by CEQA; it does not appear to meet the criteria for listing in the California Register. The road cut does not appear to be associated with an important event (Criterion 1) or significant person (Criterion 2), nor does the road cut represent a distinctive method or type of construction (Criterion 3) or is likely to yield data important to history (Criterion 4).

The study concludes that the project would not affect any significant archaeological resources. Although no significant archaeological resources were identified, no subsurface investigations were conducted and there remains the potential that archaeological resources could be encountered during project-related ground-disturbing activities. If any such resources were encountered and found to qualify as a historical resource or unique archaeological resource for CEQA purposes, project-related impacts to the resources could be significant. **Mitigation Measure CUL-1**, which will be implemented in the event of inadvertent discovery of unidentified archaeological cultural resources, requires work to halt and the resources to be thoroughly documented and treated appropriately. Implementation of this mitigation measure would ensure that impacts on archaeological resources remain at a **less-than-significant** level.

c) A significant impact would occur if the project would disturb any human remains, including those interred outside of formal cemeteries. There is no indication that the project site has been used for burial purposes in the recent or distant past. While it is unlikely that human remains would be encountered in the project site, damage to human remains would be a potentially significant impact. Implementation of **Mitigation Measure CUL-2** would reduce this potential impact to a **less-than-significant** level by ensuring that if human remains are encountered, the find will be reported to the County Coroner. If the remains are determined to be Native American in origin, the Native American Heritage Commission would be contacted and the remains would be treated appropriately.

d) A significant impact would occur if the project could cause a substantial adverse change to a tribal cultural resource through physical demolition, destruction, relocation, or alteration of the resource.

Results of the CCIC records search on June 1, 2018 (File No. 10723-O) identified five previously recorded cultural resources within 0.5 mile of the project site, including four Native American archaeological sites consisting of bedrock mortars and artifact scatters. None of these resources are located in the project site, but are recorded between approximately 0.2 and 0.5 miles from the project site.

None of the ethnographic literature reviewed for this study described or depicted any ethnographic place names in or in close proximity to the project site. Levy (1978: Fig 2)

depicts the closest place names as *Pigliku* and *Sala*, approximately 10 miles west of the project site, in the vicinity of Groveland.

ESA received a response from the NAHC on June 14, 2018 stating that the SLF has no record of any resources in the project site. On June 11, 2018 an ESA archaeologist conducted an archaeological pedestrian survey of the project site. No tribal cultural resources were identified in the project site during the pedestrian survey. The study concludes that no known tribal cultural resources are present in the project site and does not anticipate that the project would impact tribal cultural resources.

Although no tribal cultural resources were identified during the study, no subsurface investigations were conducted and there remains the potential that tribal cultural resources could be encountered during project-related ground-disturbing activities. If any such resources were encountered and found to qualify as a historical resource or unique archaeological resource for CEQA purposes, project-related impacts to the resources could be significant. **Mitigation Measure CUL-1**, which will be implemented in the event of inadvertent discovery of unidentified tribal cultural resources, requires work to halt and the resources to be thoroughly documented and appropriately treated. Implementation of this mitigation measure would ensure that impacts on tribal cultural resources remain at a **less-than-significant** level.

Mitigation Measures

Mitigation Measure CUL-1: If prehistoric or historic-era archaeological resources are encountered, all construction activities within 100 feet of the find shall halt and Tuolumne County (County) shall be notified. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-era materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. An archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology (qualified archaeologist) shall inspect the findings within 24 hours of discovery. If it is determined that the project could damage a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with Public Resources Code (PRC) § 21083.2 and CEQA Guidelines § 15126.4, with a preference for preservation in place.

Consistent with CEQA Guidelines § 15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is not feasible, a qualified archaeologist shall prepare and implement a detailed treatment plan in consultation with the County. Treatment of unique archaeological resources shall follow the applicable requirements of PRC § 21083.2. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The treatment plan shall

include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals.

Mitigation Measure CUL-2: In the event of discovery or recognition of any human remains during construction activities, such activities within 100 feet of the find shall cease until the Tuolumne County Coroner has been contacted to determine that no investigation of the cause of death is required. The Native American Heritage Commission (NAHC) will be contacted within 24 hours if it is determined that the remains are Native American. The NAHC will then identify the person or persons it believes to be the most likely descendant from the deceased Native American (PRC § 5097.98), who in turn would make recommendations to the County for the appropriate means of treating the human remains and any associated funerary objects [CEQA Guidelines § 15064.5(d)].

References

Levy, Richard, 1978. "Eastern Miwok", In *California*, pp. 398-413, edited by Robert F. Heizer, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, DC.

U.S. Geological Survey (USGS), 1990. "Ascension Mountain, California", topographic 7.5-minute (1:24,000 scale) quadrangle map, Washington, DC.

Geology, Soils, and Seismicity

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
6. 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 area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☒	☐	☐

Environmental Setting

Soil Resources

The Natural Resources Conservation Service (NRCS) mapped two soils units within the project site (NRCS, 2018). A description of each soil unit is provided below.

- **Holland family, deep- moderately deep complex, 5 to 35 percent slopes (map unit symbol 130)**, is not listed as hydric by the NRCS. Included in this soil map unit are minor components of Lithic xerumbrepts, Rock outcrop, and Dystric xerochrepts. The map unit composition is 80 percent Holland family and similar soils and 20 percent minor components. The unit consists of well drained soils.

- **Josephine family, moderately deep, deep complex, 5 to 35 percent slopes (map unit symbol 159)**, is not listed as hydric by the NRCS. Included in this soil map unit are minor components of Dystric lithic xerochrepts and Sites family. The map unit composition is 70 percent Josephine family and similar soils and 30 percent minor components. The unit consists of well drained soils.

Faults and Seismicity

A fault is defined as a "fracture or fracture zone in the earth's crust along which there has been displacement of the sides relative to one another." For the purpose of planning there are two types of faults, active and inactive. Active faults have experienced displacement in historic time, suggesting that future displacement may be expected. Inactive faults show no evidence of movement in recent geologic time, suggesting that these faults are dormant. Ground-shaking is motion that occurs as a result of energy released during faulting. The damage or collapse of buildings and other structures caused by ground-shaking is among the most serious seismic hazards. The project site lies in the foothills of the western Sierra Nevada Mountains, an area experiencing relatively low seismic activity. No active faults or Earthquake Fault Zones (Special Studies Zones) are located within or adjacent to the project area (CDC, 2018).

Liquefaction Potential

Liquefaction is a type of ground failure most likely to occur in water-saturated silts, sands, and gravels, having low to medium density. When a soil of this type is subjected to vibration, it tends to compact and decrease in volume. If the groundwater is unable to drain during the vibration, the tendency of the soil to decrease in volume results in an increase in pore-water pressure. When the pore-water pressure builds up to the point where it is equal to the over-burden pressure (effective weight of overlying soil), the effective stress becomes zero. In this condition, the soil loses its shear strength and assumes the properties of a heavy liquid. Based on the lack of published historic evidence of liquefaction in the area, the liquefaction potential of the site soils is considered low.

Tsunami, Seiche, and Volcanic Hazards

Tsunamis are earthquake-generated waves within enclosed or restricted bodies of water, such as lakes, channels, and reservoirs. Seiches are waves generated by earthquakes, winds, or landslides that set up oscillatory waves in an enclosed basin. The project site is not located near any enclosed bodies of water; therefore, there is no reasonable danger from tsunamis or seiches at the project site. There is no significant source of volcanism in proximity to the project site; therefore, there is no reasonable danger from volcanic eruption hazards at the project site.

Subsidence

Subsidence is the gradual settling or sinking of the earth's surface with little or no horizontal motion. Subsidence is caused by groundwater withdrawal, gas withdrawal, hydrocompaction or peat oxidation. Subsidence would not be expected to occur in the bedrock geology that characterizes the project site.

Expansive Soils

Expansive soils are largely comprised of clays, which greatly increase in volume when water is absorbed and shrink when dried. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. This movement may result in cracking foundations, distortion of structures and warping of doors and windows. The soil at the project site has a low shrink-swell potential (NRCS, 2018). Consequently, expansive soils are not likely an issue at the project site.

Discussion

a.i-iv) According to the CDC, Division of Mines and Geology, the project site is not located within a delineated Alquist-Priolo Earthquake Fault Zone or Landslide and Liquefaction Zone (CDC, 2018). Because the proposed project is not located in an area considered at high seismic risk, it is not expected to expose people or structures to earthquake risk, including strong seismic ground shaking, seismic-related ground failure, liquefaction, or landslides. In addition, slopes in the project area are relatively modest and pose no threat of landslides. Therefore, the proposed project would result in **no impact**.

b) Construction of the project would require site preparation which would expose surface soil materials to rainfall, potentially resulting in the removal and transport of these materials to ephemeral drainages within the project site. The project area is subject to the Central Valley Regional Water Quality Control Board (CVRWQCB) water quality standards. To minimize construction related water quality impacts, Under Canvas will obtain a Storm Water Construction General Permit (General Permit 2009-009-DWQ) from the CVRWQCB, which requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site in accordance with National Pollutant Discharge Elimination System (NPDES) requirements (see Mitigation Measure HYDRO-1). The construction contractor will be required to protect surface water quality by preventing eroded material or contaminants from entering waterways during construction through the use of best management practices (BMPs). The SWPPP lists potential sources of impacts to surface waters and BMPs that are being used to minimize the likelihood of those impacts. Conformance with these erosion control measures in addition to **Mitigation Measures HYDRO-1 and HYDRO-2** (see Hydrology and Water Quality Section) and Tuolumne County's Grading Ordinance (Chapter 12.20) will reduce potential impacts to a **less-than-significant** level.

c) As more fully described above, the proposed project is not located within a delineated Alquist-Priolo Earthquake Fault Zone. Additionally, the probability of soil liquefaction actually taking place on the project area is considered to be low. With adherence to all applicable codes and regulations, geologic hazard impacts associated with on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse would be minimized. Therefore, the proposed project would result in a **less-than-significant** impact.

d) Although no subsurface exploration has been conducted to confirm the relative absence or presence of expansive soil materials, the soils types found on-site would be expected to contain higher clay content than that of the surface. Expansive soil materials are encountered throughout the state and are generally addressed through standardized foundation engineering practices. Compliance with state standards and practices, as well as application of the existing regulations identified in the Uniform Building Code would minimize the risk associated with development of the proposed project, therefore this impact is considered **less than significant**.

e) As discussed in the Project Description, wastewater will be treated on-site through the use of a septic tank for storage and settling and a leach field for disposal. The water treatment

system capacity has been preliminarily designed to utilize two disposal areas located where there are assumed to be acceptable soils and to allow for gravity wastewater collection and disposal. Preliminary soils information is indicative that the disposal is viable in area proposed.

Compliance with the above conditions as well as the Tuolumne County Ordinance Code and **Mitigation Measure GEO-1** would result in a **less-than-significant** impact related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Mitigation Measures

Mitigation Measure GEO-1: A soils evaluation will be completed by a soils scientist to determine the viability of the proposed septic system. This evaluation will assess the suitability of the proposed septic system site to ensure the soil is capable of supporting the system. Using the soils evaluation, specific treatments will be designed based on percolation rates, soils analysis, ground water, and other considerations for complete treatment to minimize impacts to the natural environment. Wastewater treatment will be designed to meet the "guidelines for design and evaluation of special design on-site sewage treatment and disposal systems." These minimum design and evaluation standards have been developed pursuant to Tuolumne County Ordinance Code, Section 13.08.270A, August 4, 2009, Tuolumne County Division of Environmental Health. All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes.

References

California Department of Conservation (CDC), 2018. Earthquake Fault Zones Interactive Map. Available: http://maps.conservation.ca.gov/cgs/fam/.

Natural Resources Conservation Service (NRCS), 2018. Web Soil Survey. Available: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

Greenhouse Gas Emissions

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
7. GREENHOUSE GAS EMISSIONS — Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental Setting

Greenhouse gases (GHGs) trap heat by preventing some of the solar radiation that hits the earth from being reflected back into space. Some GHGs occur naturally and are needed to keep the earth's surface habitable. Over the past 100 years, human activities have substantially increased the concentration of GHGs in our atmosphere. This has intensified the natural greenhouse effect, increasing average global temperatures.

Carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are the principal GHGs associated with land use projects. CO_2, CH_4, and N_2O occur naturally, and through human activity. Emissions of CO_2 are largely by-products of fossil fuel combustion and CH_4 results from off gassing[1] associated with agricultural practices and landfills.

CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a pound-for-pound basis, how much a gas contributes to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent GHGs than CO_2, with 100-year GWPs of 28 and 265 times that of CO_2, respectively.

In emissions inventories, GHG emissions are typically reported as metric tons of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWPs than CO_2, CO_2 is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO_2e.

Tuolumne County Regional Blueprint Greenhouse Gas Study. In 2012, the Tuolumne County Transportation Council conducted a regional blueprint planning effort which developed a countywide GHG emissions inventory (including incorporated and unincorporated areas), which evaluated existing (2010) GHG emissions, and projected (2020, 2030, and 2040) emissions for three growth scenarios. It also identified policies and measures Tuolumne County and land use project applicants can implement to reduce GHG emissions consistent with AB 32 and prepare for the potential impacts of climate change. In 2010, Tuolumne County emitted approximately 782,846 metric tons of carbon dioxide equivalent GHG emissions (MT CO_2e) as a result of activities and

[1] Off-gassing is defined as the release of chemicals under normal conditions of temperature and pressure.

operations that took place within the transportation, residential (energy consumption), non-residential (energy consumption), off-road vehicles and equipment, agriculture and forestry, wastewater, and solid waste sectors. The transportation sector, which accounts for GHG emissions from fuel used to power the cars and trucks that move goods and people, was the largest contributor with 58 percent of the region's total GHG emissions (Rincon, 2012). Further, the GHG Study identifies a CEQA significance threshold of 4.6 Metric Tons of CO_2e per year per service population applicable in Tuolumne County.

Discussion

a) Construction of the proposed project would generate GHG emissions from a variety of sources, including off-road construction equipment and on-road worker, vendor, and hauling vehicles. Emissions from all of the construction emission sources were estimated using the CalEEMod emission estimator model version 2016.3.2. Peak construction-related GHG emissions would total 477 metric tons of CO_2e. These emissions would be temporary and last only for the duration of construction activities, approximately ten months.

Table GHG-1 summarizes the GHG emissions that would result from operation of uses under the project. The table includes those emission sources such as area sources (wood and pellet stoves), transportation, operational electricity consumption, solid waste disposal, water usage and wastewater generation. These emission estimates are conservative as the modeling effort assumed a motel land use as a proxy for the proposed campground. Energy demand associated with a motel use would consider air conditioning and other sources that would not be present in the campgrounds.

TABLE GHG-1
OPERATIONAL GHG EMISSIONS (METRIC TONS PER YEAR)

Emission Source	Total Emissions (MT/Year)			
	CO_2	CH_4	N_2O	Total CO_2e
Area Sources (Pellet/woodstoves)	201	0.93	<1	225
Energy Sources	291	<1	<1	293
Mobile Sources	225	<1	<1	226
Solid Waste	11.0	0.65	0	27.3
Water and Wastewater	1.92	0.57	<1	16.8
Total	**731**	**2.18**	<1	**788**
Service population 99 tents with 2.5 persons/tent				248
GHG Emissions per service population				3.2
Tuolumne County GHG Threshold				4.6
Exceeds Significance Threshold?				**No**

NOTE: Columns may not total precisely due to rounding.

SOURCE: ESA, 2018 (Appendix B)

As can be seen from the table, emissions of GHGs would be below the County's CEQA threshold. In addition, the presence of the YARTS bus stops at the entrance to the Yosemite Under Canvas facility will provide guests with the option to use the regional public transit system to access Yosemite National Park and other regional destinations. This has the potential to further reduce operational GHG emissions through trip reductions. Consequently, the proposed project would have a **less-than-significant** impact with respect to generation of GHG emissions that may have a significant impact on the environment.

b) As discussed above, the Tuolumne County Regional Blueprint Greenhouse Gas Study is a regional blueprint planning effort which developed policies and measures Tuolumne County and land use project applicants can implement to reduce GHG emissions consistent with AB 32 and prepare for the potential impacts of climate change. The GHG Study identifies a CEQA significance threshold of 4.6 Metric Tons of CO_2e per year per service population applicable in Tuolumne County which was used to assess the quantitative impact of greenhouse gas emissions above in response to question a).

CEQA Guidelines Sections 15064.4 and 15183.5 address the analysis and determination of significant impacts from a proposed project's GHG emissions and allow for projects that are consistent with an adopted GHG reduction strategy to conclude that the project's GHG impact is less than significant. Because, as demonstrated in the analysis in response to question a), above, the project's emissions would be below the threshold established in the Tuolumne County Regional Blueprint Greenhouse Gas Study which was prepared to develop a GHG emission reduction target consistent with the goals of AB32, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This impact is **less than significant**.

References

Rincon Consultants, 2012. *Tuolumne County Regional Blueprint Greenhouse Gas Study*. January 2012.

Hazards and Hazardous Materials

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
8. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☒	☐	☐

Environmental Setting

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). 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 (State of California, Health and Safety Code, Chapter 6.95, Section 25501(o)). In some cases, past industrial or commercial uses can result in spills or leaks of hazardous materials and petroleum to the ground, resulting in soil and groundwater contamination. Federal and state laws require that soils having concentrations of contaminants such as lead, gasoline, or industrial solvents that are higher than certain acceptable levels must be handled and disposed as hazardous waste during excavation, transportation, and disposal. The California Code of Regulations (CCR), Title 22, Section 66261.20-24 contains technical descriptions of characteristics that would cause a soil to be

classified as a hazardous waste. The use of hazardous materials and disposal of hazardous wastes are subject to numerous laws and regulations at all levels of government.

Information about hazardous materials sites in the project area was collected by conducting a review of the California Environmental Protection Agency's (Cal EPA) Cortese List Data Resources (Cortese List). The Cortese list includes the following data resources that provide information regarding the facilities or sites identified as meeting the Cortese list requirements: the list of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database; the list of Leaking Underground Storage Tank (LUST) sites from GeoTracker database; the list of solid waste disposal sites identified by Water Board; the list of active Cease and Desist Orders and Cleanup and Abatement Orders from Water Board; and the list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code identified by DTSC. The Cortese List is a reporting document used by the state, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. The Cortese List is updated at least annually, in compliance with California regulations (California Code Section 65964.6(a)(4)). The Cortese List includes federal superfund sites, state response sites, non-operating hazardous waste sites, voluntary cleanup sites, and school cleanup sites. Based on a review of the Cortese List conducted in May 2018, no listed active sites are located within 0.5 miles of the project site (DTSC, 2018; SWRCB, 2018).

There are no public airports or private airstrips near the project site. The project site is located within an area that is designated as a Very High Fire Hazard Severity Zone on the Tuolumne County Fire Hazard Severity Zone maps (CAL FIRE, 2007; CAL FIRE, 2008).

Discussion

a, b) Activities associated with the proposed project would utilize potentially hazardous materials associated with construction and operation of vehicles and construction equipment during proposed project implementation including diesel, gasoline, solvents, hydraulic fluid, grease, and oil. These materials are similar to those routinely used for other types of construction projects throughout Tuolumne County. Because federal, State, and County laws and regulations govern the transport, use, storage, handling and disposal of hazardous materials, use of hazardous materials associated with the proposed project's construction would be minimized and/or avoided. Therefore, the proposed project would result in a **less-than-significant** impact.

c) The proposed project would not emit hazardous emissions or require handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The nearest school is Tenaya Elementary School, located approximately 14 miles west of the project site. Therefore, the project would result in **no impact**.

d) As discussed above, research of the California Environmental Protection Agency website determined that the project site is not included on a list of hazardous material sites pursuant to Government Code Section 6592.5. Therefore, there would be no significant hazard to

the public or the environment related to hazardous materials sites. The project would result in **no impact**.

e, f) The proposed project is not located within two miles of a public or private airport or airstrip. The nearest airport to the project site is Pine Mountain Lake Airport, approximately 12 miles northwest of the project site. Accordingly, the project site is not located within an airport land use plan. Therefore, there would be no safety hazard for people residing or working in the project resulting from a public or private airport. The project would result in **no impact**.

g) The project site will be accessed from Hardin Flat Road which is a two lane roadway. According to the County's Emergency Response Plan, the project site does not contain any emergency facilities, nor does it serve as an emergency evacuation route (Tuolumne County, 2012). During construction, Hardin Flat Road would remain open. During operation of the proposed project, adequate access for emergency vehicles via Hardin Flat Road and connecting roadways will remain available. Additionally, the proposed project would not result in a substantial alteration to the design or capacity of any public road and nor would it impair or interfere with evacuation procedures. Therefore, there would be a **less-than-significant** impact relating to the interference of an adopted emergency response plan or emergency evacuation plan.

h) According to the Department of Forestry and Fire Protection, the project site is located in a Very High Fire Hazard Severity Zone on the Tuolumne County Fire Hazard Severity Zone maps. Construction activities, which include the use of spark-producing equipment, could present a significant risk to igniting wildfires. Therefore, development of the proposed project would result in a potentially significant impact. However, implementation of **Mitigation Measure HM-1** would reduce the risk of wildland fire during construction to a **less-than-significant** level and ensure the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Operation of the proposed project could present a significant risk to igniting wildfires. The operation of the proposed project would incorporate fire pits and wood burning stoves. However, as described under **Mitigation Measure HM-2**, Under Canvas will prepare a Fire Protection and Evacuation Plan to be submitted to the Tuolumne County Fire Marshal's office. Accordingly, development of the proposed project would comply with State and local fire codes and regulations. Additionally, applicable fire protection features would be incorporated into the design of the proposed project, including storing combustible material in a defensible location located a minimum of 20 feet from structures and trees. Furthermore, all tents would be built with CAL FIRE registered flame resistant materials (see Appendix A for details). Therefore, operation of the proposed project would have a **less-than-significant** impact related to exposing people or structures to a significant risk of loss, injury, or death involving wildland fires.

Mitigation Measures

Mitigation Measure HM-1: During construction, staging areas or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles and heavy equipment. In addition, the Contractor will be required to enforce a Fire Plan, which requires adherence to the USFS Project Activity Level minimum requirements and restrictions for construction activity during wildfire season.

Mitigation Measure HM-2: Under Canvas will prepare a Fire Protection and Evacuation Plan to be submitted to the Tuolumne County Fire Marshall's office. This plan will detail actions to be taken in the event of a fire and will include, but not be limited to, a fire evacuation strategy, fire prevention measures, employee training, and on-site equipment.

References

California Department of Forestry and Fire Protection (CAL FIRE), 2007. Fire Hazard Severity Zones in SRA, Tuolumne County. November, 2007. Available: http://frap.fire.ca.gov/webdata/maps/tuolumne/fhszs_map.55.pdf. Accessed June 28, 2018.

CAL FIRE, 2008. Fire Hazard Severity Zones in LRA. Tuolumne County September, 2008. Available: http://frap.fire.ca.gov/webdata/maps/tuolumne/fhszl_map.55.pdf. Accessed June 28, 2018.

Department of Toxic Substances Control (DTSC), 2018. EnviroStor. Available: http://www.envirostor.dtsc.ca.gov/public/map/?myaddress=46-200+Harrison+Place+Coachella%2C+California+92236. Accessed May 18, 2018.

State Water Resources Control Board (SWRCB), 2018. GeoTracker. Available: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=46-200+Harrison+Place+Coachella%2C+California+92236. Accessed May 18, 2018.

Tuolumne County, 2012. Emergency Operations Plan for Tuolumne County. Available: https://www.tuolumnecounty.ca.gov/DocumentCenter/View/6165/Tuolumne-County-EOP. Accessed June 28, 2018.

Hydrology and Water Quality

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
9.	**HYDROLOGY AND WATER QUALITY — Would the project:**				
a)	Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
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)?	☐	☐	☒	☐
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?	☐	☒	☐	☐
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 that would result in flooding on- or off-site?	☐	☒	☐	☐
e)	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f)	Otherwise substantially degrade water quality?	☐	☒	☐	☐
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?	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Environmental Setting

An ephemeral drainage system occurs within the project site. The main ephemeral drainage on-site is tributary to the South Fork Tuolumne River. The South Fork Tuolumne River lies approximately 0.6 miles to the south of the project site and is part of the Upper Tuolumne River Watershed. The South Fork Tuolumne River drains a small portion of the western edge of Yosemite National Park. The headwaters begin between White Wolf and Yosemite Valley at elevations between 8,000 feet and 8,500 feet. The South Fork Tuolumne River exits the park at an elevation of 4,500 feet, just north of Hodgdon Meadow and upstream of its confluence with the main Tuolumne River. The confluence of the Middle Fork and South Fork occurs approximately five miles downstream of the proposed project.

Surface water quality in the region is generally considered very good. For example, most of the water from the Tuolumne River is usable for human consumption with disinfection alone, although additional treatment is required by law (Tuolumne-Stanislaus IRWM Plan, August 2013). The majority of the surface water quality issues identified within the County can be linked back to current or historical land use practices such as mining, septic systems, livestock grazing and water based recreation activities.

The County is located within the foothills and higher elevations of the Sierra Nevada where the subsurface material consists primarily of impermeable granitic and greenstone bedrock which can result in a low groundwater yield. The California Department of Water Resources (DWR) Bulletin 118 provides a detailed description of groundwater basins in California; however, the bulletin does not identify any groundwater basins within Tuolumne County. Groundwater is the primary source of water for most small water systems in Tuolumne County. The characteristics of the fractured rock and weather fluctuations have led to some wells providing unreliable sources of water.

The proposed project is not located in an area designated as a 100-year flood zone. As described in the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, the physical geography of the County impacts and limits the flooding potential. The overall slope of the watersheds is relatively steep and the rivers and streams move run off away quickly and therefore very little flood plain has been formed (Tuolumne County, 2017). In addition, the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan lists the project area as Zone X which is for areas of minimal flood hazard.

Dam failure, which is the collapse or failure of an impoundment that causes significant downstream flooding, is not a concern for the project area. Although Tuolumne County has multiple large and small dams, only the O'Shaughnessy Dam poses a risk for significant flooding; however, the dam is located on the Middle Fork Tuolumne River and the proposed project is located near the South Fork Tuolumne River and inundation would not reach the project area.

Discussion

a, f) Exposed slopes and graded contours during construction could be subject to rainfall and erosion and could cause temporary discharges of sediment and other contaminants in stormwater runoff to surrounding areas. Even though soils within the project site are characterized as having a low erosion potential, sediments and other pollutants could result in degradation of receiving water quality in the South Fork Tuolumne River and downstream creeks at levels above applicable water quality standards. However, as discussed in the Geology, Soils, and Seismicity section, the proposed project would be subject to the requirements of the NPDES Construction General Permit from the SWRCB prior to initiating earth disturbing activities. Among other things, the conditions of the Permit include mandatory implementation of BMPs concerning erosion control and preparation of a SWPPP. Conformance with these water quality standards, in addition to **Mitigation Measures HYDRO-1** and **HYDRO-2**, will reduce water quality impacts to a **less-than-significant** level and ensure that the project will not generate substantial additional sources of polluted runoff.

b) The proposed project would provide drinking water from a certified source in compliance with California Department of Environment and Natural Resources standards from a proposed on-site well. The water source will be developed to supply an average demand of 8,050 gallons per day (gpd). The proposed groundwater well will be developed to supply 20 to 30 gallons per minute (gpm). A test well will be constructed to determine if groundwater at the project site will meet demand of the proposed project. If the test well is not successful, then Under Canvas will consider purchasing water from a licensed facility and hauling water. The proposed project also includes water storage cisterns. Water use will be metered and measured throughout the camp. In addition, water and supply designs and documents will be submitted for approval from the Tuolumne County Community Resources Agency (CRA). During the operation of the proposed project, water use will be monitored and use data will be submitted to the CRA to verify use of 20 gpd per person or less. The County has the authority to issue permits for new wells while also functioning as a groundwater sustainability agency that may regulate groundwater extraction to maintain sustainable groundwater use. These precautions and approvals by the County will ensure there is adequate groundwater supply and effects of the proposed project will be monitored to minimize impacts to groundwater supply.

The project site is 80.1 acres in total. The camp area total footprint, including roads, trails, tents, support facilities, and parking areas, is approximately 3.0 acres. This leaves approximately 96% of the project site as pervious open space and available for groundwater recharge. In addition, no paved areas are proposed (parking, roads, and bus stop will be gravel) and the tents would be situated on decks which would allow for groundwater recharge underneath them. Therefore, the proposed project would result in a **less-than-significant** impact related to the depletion of groundwater supplies or interference with groundwater recharge.

c, d) The proposed project would result in changes to the existing drainage pattern of the project site. As discussed below in **Mitigation Measure HYDRO-3**, the proposed project will include implementation of a Drainage Plan for disposing of runoff in such a manner as to protect adjacent property. General drainage patterns have been reviewed and locations for potential stormwater treatment areas (consisting of grass buffers and detention ponds) are shown in Appendix A. In addition, in order to minimize erosion or siltation on- or off-site post-construction, the proposed project shall implement **Mitigation Measure HYDRO-2**. Through implementation of a drainage pattern and plan and **Mitigation Measure HYDRO-2**, drainage would be contained on-site and erosion would be minimized. Therefore, this impact would be **less than significant**.

e) The proposed project would increase the amount of impervious surfaces; however, as described previously the vast majority of the project site would still remain as pervious open space and would not increase the amount or rate of runoff. The proposed project will include drainage plans and patterns to divert runoff to on-site grass buffers/detention areas. Therefore, this impact would be **less than significant**.

g, h) The proposed project is not located within a designated 100-year flood hazard area. As described previously, the Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan lists the project area as Zone X which is for areas of minimal flood hazard. There would be no housing constructed in a 100-year flood hazard area as part of the proposed project, nor would there be a change in the 100-year flood hazard area or impediment of flows. Therefore, **no impact** would occur.

i) As described in checklist items g) and h), the proposed project would not place any new structures in a flood hazard zone. In addition, the proposed project is not located within a dam inundation area. Therefore, no persons or structures would be exposed to a significant risk associated with flooding due to levee failure or dam inundation and **no impact** would occur.

j) The 1996 Tuolumne County General Plan Update Environmental Impact Report (EIR) states that Tuolumne County is not at risk from tsunamis, seiches, mudflows, or flooding as a result of levee failure. Therefore, no persons or structures would be exposed to a significant risk associated with inundation by a seiche, tsunami or mudflow and **no impact** would occur.

Mitigation Measures

Mitigation Measure HYDRO-1: Prepare and Implement a SWPPP. Subject to requirements of Section 402 of the federal Clean Water Act, and the National Pollutant Discharge Elimination System (NPDES) permitting process, all construction projects that disturb more than one acre of land are required to prepare and implement a stormwater pollution prevention plan (SWPPP). The SWPPP is incorporated into all project plans and specifications. The restoration construction contractor(s) will be required to post a copy of the SWPPP at the project location, file a notice of intent to discharge stormwater with the CVRWQCB, and implement all measures required by the SWPPP. A component of the SWPPP is a dewatering plan for in-channel activities. A Qualified SWPPP Practitioner (QSP) will be responsible for construction monitoring to ensure that the provisions of the SWPPP are effectively enforced. In the event of noncompliance, the QSP will have the authority to shut down the construction-site or fine the responsible party or parties.

- The SWPPP will include the following information and Best Management Practices (BMPs).
- A description of site characteristics, including runoff and drainage characteristics and soil erosion hazard.
- A description of proposed construction procedures and construction-site housekeeping BMPs, including prohibitions on discharging or washing potentially harmful materials into roads, drainages, or the creek.
- A description of BMPs that will be implemented for erosion and sediment control, including requirements to:
  - Conduct major construction activities involving excavation and spoils haulage during the dry season, to the extent possible.

  - Conduct all construction work in accordance with site-specific construction plans that minimize the potential for increased sediment inputs to\surface waters.
  - Grade and stabilize spoils sites to minimize erosion and sediment input to surface waters and generation of airborne particulate matter.
  - Implement erosion control measures as appropriate to prevent sediment from entering surface waters to the extent feasible, including the use of silt fencing or fiber rolls to trap sediments.

- A Spill Prevention and Response Plan that identifies any hazardous materials to be used during construction; describes measures to prevent, control, and minimize spillage of hazardous substances; describes transport, storage and disposal procedures for these substances; and outlines procedures to be followed in case of a spill of a hazardous material. The Spill Prevention and Response Plan will require that hazardous and potentially hazardous substances stored on-site be kept in securely closed containers located away from drainage courses and areas where stormwater is allowed to infiltrate. Spill prevention kits will be required to be kept in close proximity to construction areas and workers will be trained in their use. It will also stipulate procedures, such as the use of spill containment pans, to minimize hazard during on-site fueling and servicing of construction equipment. Finally, the Spill Prevention and Response Plan will require that all agencies listed in the Spill Prevention and Response Plan be notified immediately of any substantial spill or release.

Mitigation Measure HYDRO-2: Prepare and Implement an Erosion Control Plan. Contractors shall prepare an Erosion Control Plan for implementation for any construction to occur between October 15 and May 15 of any year. In the absence of such an approved plan, all construction shall cease on or before October 15, except that necessary to implement erosion control measures. If necessary, the plan shall be submitted to the Engineering Development Division of the Community Resources Agency of Tuolumne County for review and approval.

Mitigation Measure HYDRO-3: Prepare and Implement a Drainage Plan. A Drainage Plan for the site shall be prepared that specifies how runoff on the site will be managed in order to protect water quality and surrounding property. The plans will be developed with detailed runoff calculations to appropriately size culverts, bridges, retention ponds/areas, and road side ditches to meet the drainage requirements of the project site. The purpose of the plan will be to prevent the creation of localized on- or off-site flooding and to prevent any negative water quality effects off-site. As envisioned, stormwater would be collected through grass buffers and detention ponds, where it would settle, then be metered out to the groundwater of the on-site ephemeral drainages. If necessary, the plan shall be submitted to the Engineering Development Division of the Community Resources Agency of Tuolumne County for review and approval.

References

Tuolumne County, 2017. Tuolumne County Multi-Jurisdictional Hazard Mitigation Plan, 2018 Update. December, 2017.

Tuolumne Utilities District, 2013. Tuolumne-Stanislaus Integrated Regional Water Management Plan. August, 2013.

Land Use and Land Use Planning

Issues (and Supporting Information Sources):		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
10.	**LAND USE AND LAND USE PLANNING — Would the project:**				
a)	Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☒	☐
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Environmental Setting

The project site is located in an unincorporated area approximately 15 miles west of the community of Groveland, within the Stanislaus National Forest in Tuolumne County, on an approximately 80-acre site at the corner of Highway 120 and Hardin Flat Road. The project site is currently undeveloped forest and rural land. Land uses within the area surrounding the project site are predominately rural in nature, consisting of open land, recreation facilities, and dispersed rural residences to the west, south and east of the project site.

The project is located on lands zoned Commercial Recreation (C-K) under the Tuolumne County Ordinance Code and designated as Parks and Recreation (R/P) by the Tuolumne County General Plan (the project site also includes land zoned Open Space-1 under the Tuolumne County Ordinance Code; however, no development will occur on land with Open Space-1 designation). Commercial Recreation and Parks and Recreation both include hotels and motels and recreational facilities such as campgrounds as an allowable land use, subject to the approval of a Site Development Permit.

Discussion

a) The project site is surrounded by undeveloped land with no residences in the immediate vicinity. Therefore, the proposed project would have **no impact** related to physically dividing an established community.

b) The purpose of the R/P land use designation is to provide for recreational uses of commercial nature to serve the tourist industry as well as provide leisure activities to the County's residents. Allowed land uses include parks, camping facilities, recreational vehicle parks, ski and other resort facilities, marinas, and commercial uses in support of facilities and public utility and safety facility (Tuolumne County, 1996).

The purpose of the C-K district is to encourage well-planned and integrated resort and vacation-oriented commercial complexes in which the developer may incorporate innovative design techniques. Additionally, development in the C-K district must comply with fire safety standards, Title 15 of the Tuolumne County Ordinance Code. Recreational

structures and developments as well as hotels and motels are permitted within the C-K zoning district. In addition, within any C-K district, recreational vehicle parks and campgrounds are permitted uses subject to first securing a Site Development Permit (Tuolumne County, 2018). Because the Tuolumne County Ordinance Code does not specifically mention "glamping' as a land use, it has been determined that the proposed project most closely matches the land use of a hotel or motel. The luxury tents operate similar to a hotel or motel and provide guests with beds and linens and 77 of the tents will each have a wash basin, shower, and toilet, and operate similar to a hotel/motel. Hotels and motels are a permitted use within the C-K zoning district.

The purpose of the O-1 district is to preserve and protect areas of valuable wildlife habitat consistent with the wildlife policies of the general plan or areas with significant cultural resources. No development will occur on land zoned O-1.

Section 17.68.100 of the ordinance code requires a Site Development Permit prior to construction or expansion of building projects in the C-K district to insure that certain types of proposed developments will serve to achieve a design which is desirable. The applicant has therefore applied for Site Development Permit SDP18-002.

As described in the project description, the project proposes to develop 99 luxury campsites and associated infrastructure. Accordingly, the project does not involve a change in land use and is consistent with the County General Plan land use designations as well as the County Ordinance Code zoning designations. Additionally, the proposed project would not conflict with any policies or regulations. Therefore, the proposed project would have a **less-than-significant** impact relating to applicable land use plans, policies, and regulations.

c) The proposed project is not within a habitat conservation plan (HCP) or natural community conservation plan (NCCP). The nearest HCP is the PG&E San Joaquin Valley Operation and Maintenance Habitat Conservation Plan, located approximately ten miles south, in Mariposa County (CDFW, 2017). Therefore, the proposed project would result in **no impact**.

References

California Department of Fish and Wildlife (CDFW), 2017. California Regional Conservation Plan. Available: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=68626&inline. Accessed June 26, 2018.

Tuolumne County, 1996. Tuolumne County General Plan. Available: https://www.tuolumnecounty.ca.gov/185/General-Plan-Policy. Accessed June 27, 2018.

Tuolumne County, 2018. Tuolumne County Code of Ordinances. Available: https://www.tuolumnecounty.ca.gov/165/Tuolumne-County-Ordinance-Code#top. Accessed June 27, 2018.

Mineral Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
11. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion

a, b) Tuolumne County contains a wide variety of mineral resources. Both the USGS and the California Geological Survey (CGS) have evaluated the potential locations and production capacity of various types of extractive resources throughout the area. No known mineral resource recovery sites have been identified in the immediate project vicinity (USGS, 2017). Additionally, policy 4.E.1 of the Conservation Element of the Tuolumne County General Plan directs the County to protect lands classified as significant Mineral Resource Zone-2 (MRZ-2) by the State Department of Conservation Division of Mines and Geology, and meeting the criteria established in the General Plan for Mineral Preserve Zone (-MPZ) overlay, from conflicts, such as incompatible development on surrounding land, which might prevent future mining activities. The State of California Division of Mines and Geology surveyed Tuolumne County for the presence of economically important mineral resources. The project site does not contain areas classified as MRZ-2. Therefore, the proposed project will not result in the loss of availability of a known mineral resource or affect a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan, resulting in **no impact** to mineral resources.

References

United States Geological Survey (USGS), 2017. Mineral Resources Online Spatial Data. Available: http://mrdata.usgs.gov/mineral-resources/mrds-us.html. Accessed June 28, 2018.

Noise

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. 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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
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 project area to excessive noise levels?	☐	☐	☐	☒
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Setting

Acoustics Fundamentals and Terminology

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 dB to 140 dB corresponding to the threshold of pain. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude. Given that the typical human ear is not equally sensitive to all frequencies of the audible sound spectrum, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes low and extremely high frequencies, referred to as A-weighting, and is expressed in units of A-weighted decibels (dBA).[2]

Noise Exposure and Community Noise

Noise levels rarely persist consistently over a long period of time. Rather, noise levels at any one location vary with time. Specifically, community noise is the result of many distant noise sources that constitute a relatively stable background noise exposure where the individual contributors are unidentifiable. Throughout the day, short duration single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens) that are readily identifiable to the individual add to the existing background noise level. The combination of the slowly changing background noise and the single-event noise events give rise to a constantly changing community noise environment.

[2] All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

To legitimately characterize a community noise environment and evaluate cumulative noise impacts, community noise levels must be measured over an extended period of time. This time-varying characteristic of environmental noise is described using statistical noise descriptors, including the ones described below:

L_{eq}: The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level that would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L_{max}: The instantaneous maximum noise level measured during the measurement period of interest.

DNL: The day-night average sound level (DNL) is the energy average of the A-weighted sound levels occurring during a 24-hour period, accounting for the greater sensitivity of most people to nighttime noise by weighting ("penalizing") nighttime noise levels by adding 10 dBA to noise between 10:00 p.m. and 7:00 a.m.

CNEL: Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dBA "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to the 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise would be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- a change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- a 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

These relationships occur in part because of the logarithmic nature of the decibel system. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

The noise environment surrounding the project site is influenced by vehicle traffic along SR 120. The ambient noise environment at the project site was estimated using the traffic noise model of the Federal Highway Administration and highway volumes published by Caltrans. Based on an estimated setback of approximately 1,000 feet from SR 120, noise at the project site would be approximately 44 dBA during peak traffic hours (U.S. Department of Transportation, 2018). This is a conservative estimate which does not account for intervening topography and trees.

Sensitive Receptors

Noise concerns are described in terms of sensitive receptors, or noise sensitive land uses within hearing range of the activity. Noise sensitive receptors include areas where an excessive amount of noise would interfere with normal activities. For this assessment, noise sensitive receptors would include residential uses, public and private educational facilities, hospitals, convalescent homes, and daycare facilities. The nearest sensitive receptor to the project is a residence located approximately 1,300 feet southeast and downhill of the nearest project facilities.

Discussion

a) Tuolumne County does not have a noise ordinance in its County Code (Tuolumne County, 2018). However, the County does have a noise element in its General Plan. The General Plan establishes a maximum allowable exterior noise level from transportation sources of 60 dBA Ldn and an interior noise level of 45 dBA Ldn for land uses where people sleep (e.g., residential, lodging). Given that the worst case estimated noise level for the project site is 44 dBA during the peak traffic hour on SR 120 (U.S. Department of Transportation, 2018), proposed campsite lodging would be consistent with the noise levels standards established in the General Plan and the impact would be **less than significant**.

Operation of Yosemite Under Canvas will result in minor increases in ambient noise levels in the project vicinity due to activities such as outdoor dining, community campfire events, and vehicle movement. Operation of the camp would not include activities producing amplified sound or other significant noise producing sources, and as such, would not adversely affect the surrounding environment. In addition, the camp will impose quiet hours from 9PM to 6AM. The nearest residence is approximately 1,300 feet southeast of the nearest project facilities; at this distance, operation of the camp is not expected to produce noise impacts to this residence. Operational impacts to the noise environment would be **less than significant**.

b) Ground-borne vibration from construction activities at the project site would produce vibration. Typical reference vibration levels for various pieces of equipment, including drilling, are listed below in **Table NOI-1**. The nearest building is a Caltrans snow plow garage approximately 1,250 feet from potential construction areas and would not experience significant vibration resulting in building damage (exceeding 0.2 peak particle velocity (PPV)) or human annoyance (exceeding 0.04 PPV) at the nearest receptor. The nearest residential receptor is approximately 1,300 feet away and at this distance would be unaffected by construction related vibration. This would be a **less-than-significant** impact.

TABLE NOI-1
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment/Activity	PPV at 25 ft (inches/second)[a]	PPV at nearest building (1,250 feet)	FTA Structural Damage Criterion in PPV	Caltrans Annoyance Criterion
Large Bulldozer	0.089	0.001	0.5	0.04
Loaded Trucks	0.076	0.001	0.5	0.04

SOURCE: ESA, 2018; Federal Transit Administration, 2006a.

c) The proposed project would contribute to increased traffic volumes on local roadways. Noise level projections were made using traffic data and the Federal Highway Administration (FHWA) Noise Prediction Model. The model is based on reference noise factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, distance to the receiver, and the acoustical characteristics of the site. The traffic analysis indicates that the project would generate 25 additional vehicle trips during the a.m. peak hour and 25 additional vehicle trips during the p.m. peak hour. For the modeling effort, a.m. and p.m. peak hour traffic volumes during weekdays were analyzed.

The results of the modeling effort are shown in **Table NOI-2** for the baseline (2018) and baseline plus project scenarios. Modeled existing noise levels shown in Table NOI-2 correspond to a distance of 100 feet from the centerline of SR 120. As can be seen from Table NOI-2, the proposed project would increase existing local roadway noise levels by 0.1 dBA which is a nominal increase and undetectable by the human ear. Therefore, the project would have a **less-than-significant** roadway noise impact.

TABLE NOI-2
TRAFFIC NOISE INCREASES IN THE PROJECT AREA[A]

Road Segment	Baseline Traffic Noise	Baseline Plus Project	Project Increase
Highway 120 AM Peak Hour	63.8	63.9	0.1

NOTE:

[a] These listed values represent the modeled existing noise levels from mobile sources along specified roadways and are based on traffic data from Caltrans and the Transportation Section. Road center to receptor distance is assumed to be 30 meters (approximately 10 feet). Vehicle mix on these road segments is assumed to be 95 percent auto, 2.5 percent medium trucks, and 2.5 percent heavy truck based on Caltrans estimates. The speed for the roadway is assumed to be 55 miles per hour.

SOURCE: ESA, 2018.

d) Temporary noise increases would occur from off-road equipment operation for excavation and grading for the proposed campground and septic system as well as concrete for building pads (buildings would be pre-constructed off-site). As discussed above Tuolumne County does not have a noise ordinance that addresses construction noise, nor is construction noise specifically addressed in the Noise Element of the County's General Plan.

Construction of the proposed project would generate temporary and intermittent noise at and near the project site. Noise levels would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. Typical noise levels generated by the construction activities that would be required for construction of the proposed project are shown in **Table NOI-3**. The noisiest construction activity would be expected to range from 77 dBA to 85 dBA at a distance of 50 feet. The nearest sensitive land uses would be over 1,000 feet away and noise levels from each piece of equipment would be reduced to 48 dBA to 55 dBA at this distance. These noise levels would be below the County's 60 dBA exterior noise exposure standards if they were to apply to construction equipment.

TABLE NOI-3
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Construction Phase	Average Noise Level (dBA, Leq at 50 feet)	Average Noise Level (dBA, Leq at 1,000 feet)
Backhoe	78	48
Grader	85	55
Loader	79	49
Paver	77	48
Excavator	81	51

SOURCE: U.S. Department of Transportation, 2006b.

In order to minimize these potential impacts, the noise levels generated by the project will be restricted at the receiving property line as directed by the General Plan. These noise levels will be monitored through complaints received regarding any violations and will be investigated and resolved through established code compliance procedures. Additionally, the hours of construction will be limited to only allow construction from 7:00 a.m. to 7:00 p.m. Monday through Saturday. Exterior construction shall be prohibited on Sunday and County Holidays.

The implementation of **Mitigation Measure NOI-1** and **Mitigation Measure NOI-2** would bring the impact of temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project to a **less-than-significant** level.

e, f) The nearest airport to the project site is Pine Mountain Lake Airport, approximately 12 miles to the northwest. "Noise Sensitive Areas" of the airport have been established by the County and are over 10 miles from the project site. The nearest private airstrip to the project site is the Hermitage Landing Strip, approximately 12 miles to the northwest. Consequently, the proposed project would have **no impact** with respect to exposure of people residing or working in the project area to excessive noise levels in the vicinity of an airport or private airstrip.

Mitigation Measures

Mitigation Measure NOI-1: The noise levels generated by activities on the project site must adhere to the following General Plan exterior noise limits as measured at the property lines:

Zoning Classification of Receiving Property	Noise Level (dB) of Sound Source	
	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
MU, R-3, R-2, R-1, RE-1, RE-2, RE-3, RE-5, RE-10, C-O, C-1, C-S, BP	50 L_{eq}. (1 hour)	45 L_{eq}. (1 hour)

Mitigation Measure NOI-2: Hours of exterior construction on the project site shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Saturday. Exterior construction shall be prohibited on Sunday and County Holidays.

References

Tuolumne County, 2018. Website FAQ. Available: https://www.tuolumnecounty.ca.gov/faq.aspx?qid=164. Accessed July 18, 2018.

U.S. Department of Transportation, 2006a. Federal Highway Administration, Transit Noise and Vibration Impact Assessment. April 2006.

U.S. Department of Transportation, 2006b. Federal Highway Administration. FHWA Roadway Noise Construction Model. August 2006.

U.S. Department of Transportation, 2018. Federal Highway Administration, Office of Environment and Planning. Traffic Noise Model Version 2.5.

Population and Housing

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
13. 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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a) The project proposes to develop 99 luxury campsites and associated infrastructure and does not include a residential component intended for permanent occupation. Although tourist use will increase, operation of the proposed project would not induce substantial population growth in the area. The proposed project would provide temporary employment for several people during construction, and up to 40 seasonal employees during operation of the campground. The proposed project would not result in the permanent creation of a significant number of new jobs that would induce substantial population growth. The utilities and services associated with the project will only serve on-site uses and will not be available to other development in the area. Additionally, the proposed project would not indirectly result in supporting population growth. The project would have a **less-than-significant** impact on population growth.

b) The proposed project would be constructed on undeveloped land and would not displace any housing. Accordingly, replacement housing would not be required. There is **no impact**.

c) The project proposes to develop 99 luxury campsites and is anticipated to attract recreational visitors to the area. The campsite could employ as many as 40 full time workers. Workers employed for the proposed project are expected to come from the local work force. The proposed project would not result in the displacement of any existing housing. Accordingly, the proposed project would have **no impact** relating to the displacement of people and replacement housing would not be necessary.

Public Services

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
14. PUBLIC SERVICES — Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government 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 following public services:				
i) Fire protection?	☐	☒	☐	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Environmental Setting

Fire protection is provided to the project site by the Tuolumne County Fire Department (TCFD), a cooperative fire department with CAL FIRE. TCFD and CAL FIRE, along with eight fire districts, provide life and property emergency response within the county. Groveland Station 78 is the nearest fire station, located at 18930 Main Street in Groveland, approximately 15 miles to the west of the project site (Tuolumne County, 2018a).

The Tuolumne County Sheriff's Department (TCSD) provides law enforcement services in Tuolumne County, including the project site. The nearest station to the site is located at N. 28 Lower Sunset Drive in Sonora, approximately 25 miles northwest of the project site (Tuolumne County, 2018b).

The project site is located within the Big Oak Flat-Groveland Unified School District (TCSS, 2018).

Discussion

a.i) The Tuolumne County Fire Prevention Bureau of the Tuolumne County Fire Department has reviewed the proposed project and provided recommendations and conditions for the proposed project to ensure consistency with the National Fire Code, California Fire Code, California Building Code, the Tuolumne County General Plan and Ordinance Code. Application and enforcement of the above-mentioned code requirements would reduce impacts related to fire hazard and fire protection. As discussed in the Hazards and Hazardous Materials Section, construction activities, which include the use of spark-producing equipment, could present a significant risk to igniting wildfires. Similarly, operation of the proposed project would incorporate fire pits and wood burning stoves, which are a potential source of wildfire ignition. Therefore, the short-term impact associated with wildland fire potential and behavior could result in a significant impact to

fire protection services. However, implementation of **Mitigation Measure HM-1** would reduce the potential for wildfire associated with construction of the proposed project to a less-than-significant impact through active management of surrounding landscaping and brush. Impacts resulting from operation of the proposed project would be reduced with incorporation of fire protection features described in the Hazards and Hazardous Materials Section as well as **Mitigation Measure HM-2**. Therefore, the proposed project would have a **less-than-significant** impact, with mitigation incorporated, on fire protection services.

a.ii) Construction of the proposed project may result in accidents or emergency incidents that would require police services; however, construction activities would be short-term and limited in scope. Operation of the proposed project may result in accidents or emergency incidents requiring police services; however, these are expected to be infrequent and minor in nature. The TCSD provides law enforcement for all unincorporated areas of Tuolumne County, including the project site. The TCSD was notified of the proposed project for review, but no comments were received. The proposed project is expected to have a **less-than-significant** impact on police protection.

a.iii-v) The proposed project would develop luxury campsites and associated infrastructure and would not generate any additional demand for schools, parks, or other public facilities because no permanent residential population would be created. The proposed project will not generate any additional residential population that will increase demand on other public services in the project area. There is **no impact**.

References

Tuolumne County, 2018a. Fire Department. Available: https://www.tuolumnecounty.ca.gov/717/Fire-Department. Accessed June 28, 2018.

Tuolumne County, 2018b. Sheriff's Office. Available: https://www.tuolumnecounty.ca.gov/341/Sheriffs-Office. Accessed June 28, 2018.

Tuolumne County Superintendent of Schools (TCSS), 2018. Tuolumne County School and District Boundaries. Available: https://www.tcsos.us/tuolumne-county-schools-and-district-boundaries/. Accessed June 28, 2018.

Recreation

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
15. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Environmental Setting

Tuolumne County and the project vicinity are primarily rural. Existing recreation in the vicinity of the project site includes Yosemite National Park, the Stanislaus National Forest as well as recreational facilities operated by the Bureau of Land Management (BLM) and the State of California. The proposed project would develop 99 luxury camp sites to facilitate expanded recreational opportunities in the region. Following construction, the campsites and associated facilities will be open to the public to provide additional recreation for County residents and the area's tourist population.

Discussion

a) The proposed project would increase the area's tourist population and number of visitors at Yosemite National Park, the Stanislaus National Forest, and associated facilities. However, the proposed project has been designed to provide visitors with recreational opportunities within the designated campground areas. The proposed project will provide facilities to enhance the area as well as increase the number of visitors, and would not significantly increase the usage or the physical deterioration of surrounding recreational areas or facilities. The proposed project is intended to accommodate visitors and tourists that are already in the project vicinity. Accordingly, impacts would be **less than significant**.

b) On-site recreation facilities proposed by the project include 99 luxury camp sites and associated facilities. No additional off-site parks or recreational improvements are proposed or required as part of the proposed project. Construction and operation of the proposed recreational features would have a physical effect on the environment, which are analyzed throughout this Initial Study Checklist. Furthermore, mitigation measures have been included to reduce all identified significant impacts to **less-than-significant** levels. Therefore, impacts would be **less than significant**.

Transportation and Traffic

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
16. TRANSPORTATION/TRAFFIC — Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Environmental Setting

As discussed in the Project Description, the proposed project would include construction of a new 24-foot-wide, two-way gravel road (Under Canvas Way); a 12-foot-wide, one-way loop gravel road (cart path); two 24-foot-wide, two-lane bridges along the access road (Under Canvas Way); bus stops/pullouts on Hardin Flat Road; and approximately 130 parking spaces. The new two-lane, 24-foot wide bridges would be designed for HS-20 loading and would be based on American Association of State Highway and Transportation's (AASHTO) low-volume bridge traffic standards.

Under Canvas Way would connect with Hardin Flat Road near its western terminus at SR 120, which is also known as Big Oak Flat Road in the vicinity of the project site. Project traffic would access the project site by way of the one-way stop-controlled intersection of SR 120/Hardin Flat Road. SR 120 is a two-lane rural expressway that serves as the primary recreational route for tourists visiting Yosemite National Park. SR 120 in the vicinity of the project site is classified as an Other Principal Arterial, and is a High Emphasis interregional roadway. Although the highway allows for bicycle use, bike and pedestrian facilities are not provided, nor planned for, on this highway segment (Caltrans, 2011). The average annual daily traffic (AADT) on SR 120 in the vicinity of the project site is approximately 3,900 vehicles (Caltrans, 2017).

Yosemite Area Regional Transportation System (YARTS) offers a public shuttle during the summer months (seven days a week from May through September) on SR 120 and makes stops in Buck Meadows, Groveland, and Sonora. The nearest stop to the project site is approximately 1.5 miles east at the Yosemite Lakes Campgrounds at Yosemite Lakes Drive (Yarts, 2018). Bus stops for YARTS are proposed on each side of Hardin Flat Road at the entrance to the Yosemite Under Canvas facility. These stops will provide Yosemite Under Canvas guests with the option to use the regional public transit system to access Yosemite National Park and other regional destinations.

During construction of the proposed project, trucks would access the site daily. Based on trip generation data for similar Under Canvas facilities that are already operational, the project Applicant estimates that the proposed project would generate approximately 135 round trips per day (including guests, employees, and deliveries) once operational. The presence of the YARTS bus stops at the entrance to the Yosemite Under Canvas facility has the potential to reduce daily trip generation.

Peak period traffic would typically be between 7:30 and 10:30am and 5:00 and 10:00pm. During these periods there could be up to 25 vehicles per hour leaving in the morning and up to 25 vehicles per hour arriving in the evening.

For a Traffic Study to be required, the project must generate more than 500 vehicle trips per day or 50 vehicle trips at peak times (Tuolumne County, 2013). Therefore, a traffic study was not required for the proposed project.[3] As such, the discussion of potential transportation and traffic impacts provided below is largely qualitative.

Discussion

a) The proposed project would not increase the number of travel lanes on SR 120 or Hardin Flat Road, and would not result in a substantial long-term increase in traffic levels. The proposed project would not conflict with any plan or policy established for measuring the performance of the circulation system. Additionally, the proposed project would not result in impacts to level of service (LOS) along SR 120 or Hardin Flat Road.[4] SR 120 in the vicinity of the proposed project currently operates at LOS C (Caltrans, 2011). As noted above, the proposed project trips would generate a total of approximately 135 vehicle trips per day. These project-generated vehicle trips would represent about three percent of traffic volumes on SR 120, which is within the range of typical daily variation in traffic levels (usually on the order of ± five percent) that might be expected on these facilities, such that roadway operating conditions would remain substantially similar to current conditions and the LOS would not deteriorate.

[3] The Caltrans threshold for a facility operating at LOS C or D, such as SR 120, is 50-100 peak hour trips (Caltrans, 2002).

[4] LOS is a qualitative measure of traffic operating conditions. LOS A through F are assigned to an intersection or roadway segment, with LOS A indicating very good operations with little congestion and LOS F indicating poor operations with heavy congestion.

Compliance with Tuolumne County Ordinance Code, State regulations, and conditions of approval would result in the project having **less-than-significant** impacts. The Tuolumne County Board of Supervisors has determined that projects may contribute cumulatively to the significant adverse impacts on the County's circulation system. As a condition of approval for the project, the project proponent shall pay an appropriate Traffic Impact Mitigation Fee (TIMF) during the construction process of new development resulting from approval of the project. TIMFs will be determined as permit applications are received. TIMFs will be calculated using the recreational project type rate. The recreational project type TIMF rate is currently $1,519 per parking space (Tuolumne County, 2018). Because the Yosemite Under Canvas camp would not be open every day of the year, the TIMF would be prorated for the number of days a year Yosemite Under Canvas would be open. The project will be conditioned to pay all applicable TIMFs prior to issuance of a Certificate of Occupancy from the Building and Safety Division of the Community Resource Agency to reduce the traffic and circulation and impacts associated with the project. The payment of TIMFs and the moderate increase in the use of vehicles on the roads would result in a less-than-significant impact on traffic and LOS on SR 120. Because the payment of applicable TIMF would reduce the proposed project impacts to a **less-than-significant** level, no additional mitigation measures are necessary.

b) The proposed project would maintain traffic on existing roadways throughout construction. There would be a temporary increase in traffic volumes during construction and operation of the project, but such levels are not expected to conflict with any congestion management programs. The proposed project would maintain traffic access on Hardin Flat Road throughout construction, and would generate only a temporary increase in traffic volumes. While impacts to area congestion could occur during construction, these impacts would be minor because access would be maintained and the construction traffic volume would be small. The project would not create a conflict with adopted alternative transportation policies, plans, or programs adopted by Tuolumne County. Since there are no known significant impacts on transportation and traffic, the project will not require mitigation measures, and would have a **less-than-significant** impact on area congestion.

c) The nearest public airport is the Pine Mountain Lake Airport, located approximately 12 miles northwest of the project site in Groveland. The project is not located within any airport influence area as identified by the Tuolumne County Airport Land Use Compatibility Plan (Tuolumne County, 2003). The project proposes only vehicular access to the site. Therefore, there would be **no impact** resulting in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

d) The proposed project would not involve redesign or reconfiguration of existing roadways, and there would be no incompatible types of vehicles introduced. In addition, the project would not result in the introduction of any obstacles to nor would it otherwise impede pedestrian and bicycle movements in the area. The new roadway, cart path, and bridge would be designed to avoid potential hazards. The new YARTS bus stops/pullouts on Hardin Flat Road at the entrance to the Yosemite Under Canvas facility would be designed

according to the specifications provided by the Tuolumne County Transportation Council, which would avoid any potential hazards to roadway users.[5] Therefore, impacts would be **less than significant**.

e) As described above, the proposed project would not alter the physical configuration of the existing roadway network serving the area, and would have no effect on access to local streets or adjacent uses (including access for emergency vehicles). Internal roadways (i.e., Under Canvas Way and the bridges) would be 24-feet-wide, which meets CAL FIRE requirements for vehicle access. Furthermore, as noted above under impact discussion a), increased project-related operational traffic would not cause a significant increase in congestion and would not significantly affect the existing LOS on area roads. Although some campsites would not be immediately adjacent to Under Canvas Way, all Under Canvas staff will be trained in emergency procedures for inclement weather (severe storms) and fire hazards, and as first responders for medical emergencies to guests. Therefore, emergency responders will have access to each site. The impact to emergency vehicle access would be **less than significant**.

f) The Circulation Element of the Tuolumne County General Plan has numerous policies and implementation programs regarding alternative transportation (non-motorized transportation, public transportation, and rail). These programs are geared towards improvements to facilitate movement to and from urban and high density areas. Due to the location and nature of this project, these programs are not applicable. However, the project would include new bus stops/pull outs on each side of Hardin Flat Road at the entrance to the Yosemite Under Canvas facility, to be served by YARTS. The bus stops would be designed to accommodate a 45-foot YARTS coach and would provide guests with the option to use the regional public transit system to access Yosemite National Park and other regional destinations. It is unlikely that development of the Under Canvas site would result in a significant increase of ridership on the YARTS shuttle that could not be accommodated by existing service. Therefore, the impact would be **less than significant** on adopted policies, plans, or programs supporting alternative transportation for the proposed project.

References

Caltrans Department of Transportation (Caltrans), 2002. Caltrans Guide for the Preparation of Traffic Impact Studies. December 2002.

Caltrans, 2011. Transportation Concept Route State Route 120. Caltrans Department of Transportation, District 10 Office of System Planning and Goods Movement. January 2011.

Caltrans, 2017. 2016 Traffic Volumes on California State Highways. Caltrans Department of Transportation, Division of Traffic Operations. 2017.

[5] Correspondence from the Tuolumne County Transportation Council to the Tuolumne County Community Resources Agency, dated November 5, 2018.

Tuolumne County, 2003. Tuolumne County Airport Land Use Compatibility Plan. Tuolumne County, California. Adopted by Tuolumne County Airport Land Use Commission. January 22, 2003. Prepared by: Shutt Moen Associates.

Tuolumne County, 2013. Tuolumne County General Plan and Regional Transportation Plan Evaluation and Analysis. Prepared for County of Tuolumne. Submitted by Rincon Consultants, Inc. July 2013.

Tuolumne County, 2018. Chapter 3.54 Traffic Impact Mitigation Fees. Accessed July 23, 2018.

Yosemite Area Regional Transportation System (YARTS), 2018. YARTS Public Transit to Yosemite. Sonora, Groveland, Yosemite Valley Highway 120 Bus Schedule. Available: https://yarts.com/routes-and-schedules/sonora-buck-meadows-yosemite-valley/. Accessed July 23, 2018.

Utilities and Service Systems

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
17.	**UTILITIES AND SERVICE SYSTEMS — Would the project:**				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
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?	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Environmental Setting

Water quality within Tuolumne County is regulated by the State Regional Water Quality Control Board's Central Valley Region 5. As discussed in the Project Description, an on-site well would provide potable water and fire protection for the campground. Yosemite Under Canvas plans to implement water efficient fixtures and washing machines, and follow efficient water use practices for applicable operations and maintenance. Wastewater will be treated on-site through the use of a septic tank for storage and settling and a leach field for disposal. The Moore Bros Scavenger Co., Inc. provides solid waste service for southern Tuolumne County, including the project site (Tuolumne County, 2018). Electricity would be provided by Pacific Gas and Electric, with various propane/gas providers also serving the area.

Discussion

a) The proposed project would develop a campground on a currently vacant site; therefore, all wastewater generated by the project is expected to be domestic sewage. Additionally, the proposed project will comply with all the wastewater requirements of the CVRWQCB (refer to the Hydrology and Water Quality section for more information); therefore, this impact is considered **less than significant**.

b, d) The proposed project would provide potable water from a certified source in compliance with California Department of Environment and Natural Resources standards from a

proposed on-site well. The proposed on-site well would be developed to supply an average demand of 8.050 gpd. The proposed groundwater source well will be developed to supply 20 to 30 gallons per minute (gpm). Potable water supplied from the on-site well would be stored in water storage cisterns on the project site and be distributed via small diameter distribution lines.

Wastewater will be treated on-site through the use of a septic tank for storage and settling and a leach field for disposal. A sewer main will be installed to collect the effluent and transport it to the septic tank for settling. The settled effluent will then be pressure dosed to a leach field with sand trenches for disposal. The water treatment system capacity has been preliminarily designed to utilize two disposal areas located where there may be acceptable soils and to allow for gravity wastewater collection and disposal.

Development of the water and wastewater infrastructure would result in impacts to the project site. However, these impacts are considered as part of the project's construction and operation, and are evaluated throughout this Initial Study. In instances where significant impacts have been identified, mitigation measures are required to reduce impacts to less than significant levels. This impact is considered **less than significant**.

c) As described in Mitigation Measure HYDRO-3, a Drainage Plan for the site shall be prepared that specifies how runoff on the site will be managed in order to protect water quality and surrounding property. The plans will be developed with detailed runoff calculations to appropriately size culverts, bridges, retention ponds/areas, and road side ditches to meet the drainage requirements of the project site. The purpose of the plan will be to prevent the creation of localized on- or off-site flooding and to prevent any negative water quality effects off-site. As envisioned, stormwater would be collected through grass buffers and detention ponds, where it would settle, then be metered out to the groundwater of the on-site ephemeral drainages. Construction and operation of stormwater treatment areas would result in impacts to the project site. However, these impacts are considered as part of the proposed project and are evaluated throughout this Initial Study. In instances where significant impacts have been identified for the project, mitigation measures are required to reduce impacts to less than significant levels. This impact is considered **less than significant**.

e) The project site would be served by private water and septic systems; therefore, approval of the proposed project would result in **no impact** related to a wastewater treatment provider's capacity to serve the project.

f) Project construction would generate solid waste from excavation activities, roadway materials, and general waste. All solid waste collected at the project site would be brought to transfer stations in Groveland or East Sonora, before being transferred by Cal Sierra Disposal to the Highway 59 Disposal Site, located at 7040 N. Highway 59 in Merced (Tuolumne County, 2018). The Highway 59 Disposal Site is well below its maximum permitted capacity of 30,012,352 cubic yards, with 28,025,334 cubic yards remaining capacity (Cal Recycle, 2018a). Construction waste generated by the project is not

anticipated to cause the disposal site to exceed its maximum permitted disposal volume as no structures would be demolished. Additionally, the Highway 59 Disposal Site is not expected to reach its total maximum permitted disposal capacity during the project's construction period. Therefore, the Highway 59 Disposal Site will have sufficient capacity to accept construction solid waste generated by the project.

Based on a waste generation factor of 0.001 tons per room per day, as documented by the Cal Recycle website, the project's proposed 99 tents would generate approximately 0.099 tons per day, or 36 tons per year (CalRecycle, 2018b). The Highway 59 Disposal Site has a permitted disposal capacity of 1,500 tons per day and is estimated to reach capacity in 2030. During operation, solid waste generated from the project would represent less than 0.007 percent of the daily permitted disposal capacity at the Highway 59 Disposal Site. The proposed project would generate a relatively small amount of solid waste per day, as compared to the permitted daily capacity at the Highway 59 Disposal Site; therefore, the landfill will have sufficient capacity to accept solid waste generated by the project and impacts would be **less than significant**.

g) Construction and operation of the proposed project would comply with all federal, state, and local statutes and regulations related to solid waste. Therefore, there would be **no impact**.

References

CalRecycle, 2018a. SWIS Facility Detail – Highway 59 Disposal Site. Available: https://www2.calrecycle.ca.gov/swfacilities/Directory/24-AA-0001/. Accessed September 13, 2018.

CalRecycle, 2018b. Estimated Solid Waste Generation Rates. Available: https://www2.calrecycle.ca.gov/wastecharacterization/general/rates. Accessed September 13, 2018.

Tuolumne County, 2018. General Plan Update Draft EIR. Available: https://www.tuolumnecounty.ca.gov/889/General-Plan-Update. Accessed September 13, 2018.

Mandatory Findings of Significance

Issues (and Supporting Information Sources):		*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
18.	**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?	☐	☒	☐	☐
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)?	☐	☒	☐	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

a) Per the impact discussions above, the potential of the proposed project to substantially degrade the environment is **less than significant** with incorporated mitigation measures. As described in this Initial Study, the proposed project has the potential for impacts related to biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and public services. However, these impacts would be avoided or reduced to a less-than-significant level with the incorporation of avoidance and mitigation measures discussed in each section.

b) The past, present and reasonably foreseeable future conditions of the project site and vicinity were considered for the cumulative analysis. A specific project in the vicinity which was considered is the Terra Vi Lodge Yosemite project, located directly north of the proposed project across State Highway 120. Tuolumne County received an application to allow the development of the Terra Vi Lodge Yosemite project, which includes a master planned lodging development with 140 guest rooms, 25 four-bedroom cabins, a market, a lodge, an event space and support buildings.

Aesthetics. The proposed project would not contribute to cumulative impacts as it would be screened by existing trees from motorists along Highway 120.

Agricultural and Forest Resources. Both the proposed project and the Terra Vi Lodge Yosemite project would include development on land zoned Commercial Recreation (C-K). While both projects are located in a forested area they represent a very small fraction of the forested land in the vicinity. The proposed project would remove the fewest trees

possible and is not anticipated to result in the conversion of any off-site forest land to non-forest use. As such cumulative impacts to forest resources would be less than significant.

Air Quality and GHG Emissions. For cumulative impacts to air quality and GHG emissions see the Air Quality and GHG Emissions sections above. The thresholds used consider the contribution of other projects within the air basin. Additionally, GHG Emissions are considered cumulative in nature because it is unlikely that a single project would contribute significantly to climate change.

Biological Resources, Cultural Resources, Geology/Soils/Seismicity, Hazards and Hazardous Materials, and Public Services. The project's impacts for these environmental issues would be limited to the project site and thus would not contribute to cumulative impacts.

Hydrology and Water Quality. Both the proposed project and the Terra Vi Lodge Yosemite project would be required to develop plans to address stormwater during construction and operation. With this requirement, cumulative impacts would be less than significant.

Land Use and Land Use Planning. The proposed project is an allowable use under the existing zoning and would not contribute to cumulative land use issues.

Mineral Resources. The project would have no impact to mineral resources and thus does not contribute to cumulative impacts.

Noise. The project's noise impacts are anticipated to be minor and the project will comply with the noise standards in the Noise Element of the General Plan. As such, cumulative noise impacts would be less than significant.

Population and Housing. Although tourist use will increase, operation of the proposed project would not induce substantial population growth in the area. The proposed project would provide temporary employment for several people during construction, and up to 40 seasonal employees during operation of the campground. The proposed project would not result in the permanent creation of a significant number of new jobs that would induce substantial population growth. Therefore, cumulative population and housing impacts would be less than significant.

Recreation. The proposed project would increase the area's tourist population and number of visitors at Yosemite National Park, the Stanislaus National Forest, and associated facilities. However, the proposed project has been designed to provide visitors with recreational opportunities within the designated campground areas. The proposed project will provide facilities to enhance the area as well as increase the number of visitors, and would not significantly increase the usage or the physical deterioration of surrounding recreational areas or facilities. The proposed project is intended to accommodate visitors and tourists that are already in the project vicinity. Accordingly, cumulative impacts to recreation would be less than significant.

Transportation and Traffic. For cumulative impacts see the Transportation and Traffic section above. A traffic impact mitigation fee program has been developed to address cumulative traffic impacts within Tuolumne County.

Utilities and Service Systems. The project site would be served by private water and septic systems, and would generate a relatively small amount of solid waste per day. Stormwater would be treated on-site. Therefore, cumulative impacts to utilities and service systems would be less than significant.

As described above, the impacts of the proposed project are minimal, site specific, and/or mitigated to a less-than-significant level. None of the impacts would be cumulatively considerable. The cumulative impact of the proposed project is **less than significant**.

c) The proposed project will not result in any substantial adverse effects to human beings, either directly or indirectly, since each potentially significant impact can be reduced to a less-than-significant level with the implementation of the mitigation measures provided in this document. No other substantial adverse effects to human beings are anticipated as a result of this project, resulting in a **less-than-significant** impact.

Appendix A
Project Design

Project Narrative:

1. **Trash:** Under Canvas will utilize dumpsters on the property, which will be located near the entrance of the property. These will be regularly emptied and serviced by a local provider.
2. **Seasonal** Under Canvas is a seasonal business operating between March-October. At the end of every season water lines will be blown out and the camp winterized. The lines on the property are all considered private and the company's responsibility from the meter and manhole.
   Many of the tents may be taken down at the end of the season and put into storage with only some of the larger tents remaining up through the winter. Under Canvas employees will manage and maintain all equipment.
3. **Road Maintenance:** Roads will be graded annually and further maintenance as needed will be undertaken by Under Canvas to maintain a 20' width. Roads will be compacted and surfaced with crushed gravel. Culverts and weir road crossings will be installed to direct water away from road surfaces and along existing historic drainage paths.
4. **Emergency Protocol:** All Under Canvas staff will be trained in emergency procedures for inclement weather (severe storms), fire and as first responders for medical emergencies to guests. Emergency responders will have access to each site.
5. **Water and Sewer:** General all water and sewer lines that are in trails and 12' paths will be buried. Other lines that service tents and facilities may be on or near the surface. The camp will be closed in the winter and all facilities will be winterized. All lines are considered private and are the responsibility of Under Canvas.
6. **Estimated Traffic Impact:** Peak hour traffic is typically between 7:30 and 10:30am and 5:00 and 10:00pm. During these periods there could be 35 vehicles/hr leaving in the morning and 25 vehicles/hr arriving in the evening. Total round trips per day is estimated at 160 including guests, employees, and deliveries.
7. **Lighting:** All exterior lighting will by down lighting and comply with dark sky standards.
8. **Fire Risk and Defensible Space:** Fires are allowed only in the fire pits as shown. Smoking is only allowed in a designated areas and no smoking or camp fires are allowed at tent locations. Areas around tents and other facilities will be kept clear of dead wood and vegetation for fuel reduction. General USFS guide lines will be followed for camp ground maintenance regarding fuel reduction. The water supply system will have a hose and yard hydrant at the fire pits and in other areas around the camp for quick response situations.

SITE STATISTICS:

TENTS	30,500 SF
AMENITIES	9,000 SF
ACCESS ROADS (20' Surface)	44,000 SF
CART PATHS (12' Width)	26,680 SF
PARKING	20,500 SF
TOTAL CAMP	130,680 SF

PERCENT OPEN SPACE:

TOTAL AREA = 79.1 ACRES
CAMP AREA = 3.0 ACRES
OPEN SPACE = 76.1 ACRES

= (76.1/79.1) X 100 = **96.2%**

LEGEND

- PROPERTY LINE
- MAJOR CONTOURS (10' INTERVAL)
- MINOR CONTOURS (2' INTERVAL)
- EPHEMERAL DRAINAGE
- PROPOSED GRAVEL ROADS
- PROPOSED CART PATHS (12' WIDE TYP)
- PROPOSED CULVERTS
- GRAVEL PARKING SPACES (135)
- SAFARI TENTS (22)
- DELUXE TENTS (63)
- SUITE TENTS (14)
- FP — FIRE PIT
- LOBBY TENT
- BATH CABINS

0 50 100 150 200 250

SCALE: 1"=100'

SITE PLAN NOTES:

1. TENT LOCATIONS, WATER, AND SEWER MAY BE ADJUSTED.
2. PROPOSED DITCHES AND WATERWAYS WILL BE ON FINAL PLANS.
3. NO PAVED AREAS ARE PROPOSED.
4. ADDITIONAL PARKING SPACES SHALL BE ADDED ALONG THE ONEWAY ROAD.

SHEET C-101

G L Gritz Engineering
(209) 770-2853 120 Summit Avenue, Sonora, California 95370
5520 Sourdough Rd., Bozeman, MT 59715 Phone: (406) 925-0590

YOSEMITE UNDER CANVAS
TUOLUMNE COUNTY, CA
S26, T1S, R18E
SITE PLAN

Date: 01/10/2019
Drawn By: MS
Checked By: WHA
Revisions: 6.4

Appendix B

Air Quality and Greenhouse Gas Emission Modeling

B1. CalEEMod Model Output for Project Emissions

B2. CalEEMod Model Output for Woodstove Emissions

B1. CalEEMod Model Output for Project Emissions

Under Canvas Campsite

Tuolumne County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Motel	99.00	Room	3.20	139,352.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	66
Climate Zone	1			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E EF for 2020

Land Use - Camp is on 80 acres with 96% open space.

Construction Phase -

Vehicle Trips - Adjust trip rates to match Transportation analysis.

Woodstoves -

Area Coating -

Energy Use -

Water And Wastewater - Campsite. No outdoor water use.; all wastewater is septic

Under Canvas Campsite - Tuolumne County, Annual

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	194,059.80	139,352.00
tblLandUse	LotAcreage	4.46	3.20
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	5.63	2.73
tblVehicleTrips	SU_TR	5.63	2.73
tblVehicleTrips	WD_TR	5.63	2.73
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3999	3.2394	2.9603	4.8200e-003	0.1444	0.1709	0.3153	0.0581	0.1604	0.2185	0.0000	427.8468	427.8468	0.0847	0.0000	429.9642
2020	1.6180	0.0160	0.0247	4.0000e-005	8.5000e-004	1.0100e-003	1.8600e-003	2.3000e-004	1.0100e-003	1.2300e-003	0.0000	3.1110	3.1110	2.5000e-004	0.0000	3.1173
Maximum	**1.6180**	**3.2394**	**2.9603**	**4.8200e-003**	**0.1444**	**0.1709**	**0.3153**	**0.0581**	**0.1604**	**0.2185**	**0.0000**	**427.8468**	**427.8468**	**0.0847**	**0.0000**	**429.9642**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3999	3.2394	2.9603	4.8200e-003	0.1444	0.1709	0.3153	0.0581	0.1604	0.2185	0.0000	427.8464	427.8464	0.0847	0.0000	429.9638
2020	1.6180	0.0160	0.0247	4.0000e-005	8.5000e-004	1.0100e-003	1.8600e-003	2.3000e-004	1.0100e-003	1.2300e-003	0.0000	3.1110	3.1110	2.5000e-004	0.0000	3.1173
Maximum	**1.6180**	**3.2394**	**2.9603**	**4.8200e-003**	**0.1444**	**0.1709**	**0.3153**	**0.0581**	**0.1604**	**0.2185**	**0.0000**	**427.8464**	**427.8464**	**0.0847**	**0.0000**	**429.9638**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	0.9799	0.9799
2	4-1-2019	6-30-2019	0.9155	0.9155
3	7-1-2019	9-30-2019	0.9255	0.9255
4	10-1-2019	12-31-2019	0.8056	0.8056
5	1-1-2020	3-31-2020	1.5564	1.5564
		Highest	1.5564	1.5564

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	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Energy	0.0156	0.1418	0.1191	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	291.1251	291.1251	0.0166	5.6600e-003	293.2274
Mobile	0.1638	0.4679	1.6727	2.4900e-003	0.1913	3.4500e-003	0.1948	0.0515	3.2400e-003	0.0547	0.0000	225.7644	225.7644	0.0163	0.0000	226.1719
Waste						0.0000	0.0000		0.0000	0.0000	11.0021	0.0000	11.0021	0.6502	0.0000	27.2573
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.9160	1.9160	0.5706	1.9700e-003	16.7678
Total	**0.8852**	**0.6097**	**1.7927**	**3.3400e-003**	**0.1913**	**0.0142**	**0.2056**	**0.0515**	**0.0140**	**0.0655**	**11.0021**	**518.8071**	**529.8092**	**1.2537**	**7.6300e-003**	**563.4263**

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	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Energy	0.0156	0.1418	0.1191	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	291.1251	291.1251	0.0166	5.6600e-003	293.2274
Mobile	0.1638	0.4679	1.6727	2.4900e-003	0.1913	3.4500e-003	0.1948	0.0515	3.2400e-003	0.0547	0.0000	225.7644	225.7644	0.0163	0.0000	226.1719
Waste						0.0000	0.0000		0.0000	0.0000	11.0021	0.0000	11.0021	0.6502	0.0000	27.2573
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.9160	1.9160	0.5706	1.9700e-003	16.7678
Total	**0.8852**	**0.6097**	**1.7927**	**3.3400e-003**	**0.1913**	**0.0142**	**0.2056**	**0.0515**	**0.0140**	**0.0655**	**11.0021**	**518.8071**	**529.8092**	**1.2537**	**7.6300e-003**	**563.4263**

	ROG	NOx	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	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 209,028; Non-Residential Outdoor: 69,676; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	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	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	59.00	23.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1139	0.0552	9.0000e-005		5.9800e-003	5.9800e-003		5.5000e-003	5.5000e-003	0.0000	8.5422	8.5422	2.7000e-003	0.0000	8.6097
Total	**0.0108**	**0.1139**	**0.0552**	**9.0000e-005**	**0.0452**	**5.9800e-003**	**0.0512**	**0.0248**	**5.5000e-003**	**0.0303**	**0.0000**	**8.5422**	**8.5422**	**2.7000e-003**	**0.0000**	**8.6097**

3.2 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	4.0000e-004	3.7800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3484	0.3484	3.0000e-005	0.0000	0.3492
Total	**4.8000e-004**	**4.0000e-004**	**3.7800e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3484**	**0.3484**	**3.0000e-005**	**0.0000**	**0.3492**

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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1139	0.0552	9.0000e-005		5.9800e-003	5.9800e-003		5.5000e-003	5.5000e-003	0.0000	8.5422	8.5422	2.7000e-003	0.0000	8.6097
Total	**0.0108**	**0.1139**	**0.0552**	**9.0000e-005**	**0.0452**	**5.9800e-003**	**0.0512**	**0.0248**	**5.5000e-003**	**0.0303**	**0.0000**	**8.5422**	**8.5422**	**2.7000e-003**	**0.0000**	**8.6097**

3.2 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	4.0000e-004	3.7800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3484	0.3484	3.0000e-005	0.0000	0.3492
Total	**4.8000e-004**	**4.0000e-004**	**3.7800e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.6000e-004**	**9.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3484**	**0.3484**	**3.0000e-005**	**0.0000**	**0.3492**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.1134	0.0652	1.2000e-004		5.5900e-003	5.5900e-003		5.1400e-003	5.1400e-003	0.0000	10.6569	10.6569	3.3700e-003	0.0000	10.7412
Total	**0.0103**	**0.1134**	**0.0652**	**1.2000e-004**	**0.0262**	**5.5900e-003**	**0.0318**	**0.0135**	**5.1400e-003**	**0.0186**	**0.0000**	**10.6569**	**10.6569**	**3.3700e-003**	**0.0000**	**10.7412**

3.3 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	5.3000e-004	5.0400e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.8000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4645	0.4645	5.0000e-005	0.0000	0.4657
Total	**6.4000e-004**	**5.3000e-004**	**5.0400e-003**	**1.0000e-005**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**1.3000e-004**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**0.4645**	**0.4645**	**5.0000e-005**	**0.0000**	**0.4657**

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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.1134	0.0652	1.2000e-004		5.5900e-003	5.5900e-003		5.1400e-003	5.1400e-003	0.0000	10.6569	10.6569	3.3700e-003	0.0000	10.7412
Total	**0.0103**	**0.1134**	**0.0652**	**1.2000e-004**	**0.0262**	**5.5900e-003**	**0.0318**	**0.0135**	**5.1400e-003**	**0.0186**	**0.0000**	**10.6569**	**10.6569**	**3.3700e-003**	**0.0000**	**10.7412**

3.3 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	5.3000e-004	5.0400e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.8000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4645	0.4645	5.0000e-005	0.0000	0.4657
Total	**6.4000e-004**	**5.3000e-004**	**5.0400e-003**	**1.0000e-005**	**4.7000e-004**	**1.0000e-005**	**4.8000e-004**	**1.3000e-004**	**1.0000e-005**	**1.3000e-004**	**0.0000**	**0.4645**	**0.4645**	**5.0000e-005**	**0.0000**	**0.4657**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2715	2.4241	1.9738	3.0900e-003		0.1483	0.1483		0.1395	0.1395	0.0000	270.3698	270.3698	0.0659	0.0000	272.0164
Total	**0.2715**	**2.4241**	**1.9738**	**3.0900e-003**		**0.1483**	**0.1483**		**0.1395**	**0.1395**	**0.0000**	**270.3698**	**270.3698**	**0.0659**	**0.0000**	**272.0164**

3.4 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0202	0.4103	0.1608	7.2000e-004	0.0172	3.8600e-003	0.0211	4.9700e-003	3.6900e-003	8.6600e-003	0.0000	68.4948	68.4948	2.7000e-003	0.0000	68.5623
Worker	0.0726	0.0604	0.5705	5.9000e-004	0.0536	6.8000e-004	0.0542	0.0143	6.3000e-004	0.0149	0.0000	52.5266	52.5266	5.2100e-003	0.0000	52.6568
Total	**0.0928**	**0.4707**	**0.7313**	**1.3100e-003**	**0.0708**	**4.5400e-003**	**0.0753**	**0.0192**	**4.3200e-003**	**0.0235**	**0.0000**	**121.0214**	**121.0214**	**7.9100e-003**	**0.0000**	**121.2192**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2715	2.4241	1.9738	3.0900e-003		0.1483	0.1483		0.1395	0.1395	0.0000	270.3695	270.3695	0.0659	0.0000	272.0161
Total	**0.2715**	**2.4241**	**1.9738**	**3.0900e-003**		**0.1483**	**0.1483**		**0.1395**	**0.1395**	**0.0000**	**270.3695**	**270.3695**	**0.0659**	**0.0000**	**272.0161**

3.4 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0202	0.4103	0.1608	7.2000e-004	0.0172	3.8600e-003	0.0211	4.9700e-003	3.6900e-003	8.6600e-003	0.0000	68.4948	68.4948	2.7000e-003	0.0000	68.5623
Worker	0.0726	0.0604	0.5705	5.9000e-004	0.0536	6.8000e-004	0.0542	0.0143	6.3000e-004	0.0149	0.0000	52.5266	52.5266	5.2100e-003	0.0000	52.6568
Total	**0.0928**	**0.4707**	**0.7313**	**1.3100e-003**	**0.0708**	**4.5400e-003**	**0.0753**	**0.0192**	**4.3200e-003**	**0.0235**	**0.0000**	**121.0214**	**121.0214**	**7.9100e-003**	**0.0000**	**121.2192**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.1148	0.1108	1.7000e-004		6.4800e-003	6.4800e-003		5.9700e-003	5.9700e-003	0.0000	15.0501	15.0501	4.6300e-003	0.0000	15.1658
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0114**	**0.1148**	**0.1108**	**1.7000e-004**		**6.4800e-003**	**6.4800e-003**		**5.9700e-003**	**5.9700e-003**	**0.0000**	**15.0501**	**15.0501**	**4.6300e-003**	**0.0000**	**15.1658**

3.5 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9300e-003	1.6000e-003	0.0151	2.0000e-005	1.4200e-003	2.0000e-005	1.4400e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	1.3935	1.3935	1.4000e-004	0.0000	1.3969
Total	**1.9300e-003**	**1.6000e-003**	**0.0151**	**2.0000e-005**	**1.4200e-003**	**2.0000e-005**	**1.4400e-003**	**3.8000e-004**	**2.0000e-005**	**3.9000e-004**	**0.0000**	**1.3935**	**1.3935**	**1.4000e-004**	**0.0000**	**1.3969**

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	0.0114	0.1148	0.1108	1.7000e-004		6.4800e-003	6.4800e-003		5.9700e-003	5.9700e-003	0.0000	15.0501	15.0501	4.6300e-003	0.0000	15.1658
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0114**	**0.1148**	**0.1108**	**1.7000e-004**		**6.4800e-003**	**6.4800e-003**		**5.9700e-003**	**5.9700e-003**	**0.0000**	**15.0501**	**15.0501**	**4.6300e-003**	**0.0000**	**15.1658**

3.5 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9300e-003	1.6000e-003	0.0151	2.0000e-005	1.4200e-003	2.0000e-005	1.4400e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	1.3935	1.3935	1.4000e-004	0.0000	1.3969
Total	**1.9300e-003**	**1.6000e-003**	**0.0151**	**2.0000e-005**	**1.4200e-003**	**2.0000e-005**	**1.4400e-003**	**3.8000e-004**	**2.0000e-005**	**3.9000e-004**	**0.0000**	**1.3935**	**1.3935**	**1.4000e-004**	**0.0000**	**1.3969**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.6147					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3024
Total	**1.6169**	**0.0152**	**0.0165**	**3.0000e-005**		**1.0000e-003**	**1.0000e-003**		**1.0000e-003**	**1.0000e-003**	**0.0000**	**2.2979**	**2.2979**	**1.8000e-004**	**0.0000**	**2.3024**

3.6 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.7000e-004	8.2200e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8130	0.8130	7.0000e-005	0.0000	0.8149
Total	**1.0800e-003**	**8.7000e-004**	**8.2200e-003**	**1.0000e-005**	**8.5000e-004**	**1.0000e-005**	**8.6000e-004**	**2.3000e-004**	**1.0000e-005**	**2.4000e-004**	**0.0000**	**0.8130**	**0.8130**	**7.0000e-005**	**0.0000**	**0.8149**

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	1.6147					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3024
Total	**1.6169**	**0.0152**	**0.0165**	**3.0000e-005**		**1.0000e-003**	**1.0000e-003**		**1.0000e-003**	**1.0000e-003**	**0.0000**	**2.2979**	**2.2979**	**1.8000e-004**	**0.0000**	**2.3024**

3.6 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.7000e-004	8.2200e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8130	0.8130	7.0000e-005	0.0000	0.8149
Total	**1.0800e-003**	**8.7000e-004**	**8.2200e-003**	**1.0000e-005**	**8.5000e-004**	**1.0000e-005**	**8.6000e-004**	**2.3000e-004**	**1.0000e-005**	**2.4000e-004**	**0.0000**	**0.8130**	**0.8130**	**7.0000e-005**	**0.0000**	**0.8149**

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	0.1638	0.4679	1.6727	2.4900e-003	0.1913	3.4500e-003	0.1948	0.0515	3.2400e-003	0.0547	0.0000	225.7644	225.7644	0.0163	0.0000	226.1719
Unmitigated	0.1638	0.4679	1.6727	2.4900e-003	0.1913	3.4500e-003	0.1948	0.0515	3.2400e-003	0.0547	0.0000	225.7644	225.7644	0.0163	0.0000	226.1719

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Motel	270.27	270.27	270.27	512,910	512,910
Total	270.27	270.27	270.27	512,910	512,910

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
Motel	9.50	7.30	7.30	19.00	62.00	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Motel	0.471330	0.050819	0.207818	0.162046	0.053743	0.008065	0.018819	0.011540	0.003291	0.001284	0.007070	0.001791	0.002386

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	136.7464	136.7464	0.0137	2.8300e-003	137.9313
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	136.7464	136.7464	0.0137	2.8300e-003	137.9313
NaturalGas Mitigated	0.0156	0.1418	0.1191	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.3787	154.3787	2.9600e-003	2.8300e-003	155.2961
NaturalGas Unmitigated	0.0156	0.1418	0.1191	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.3787	154.3787	2.9600e-003	2.8300e-003	155.2961

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					
Motel	2.89295e+006	0.0156	0.1418	0.1191	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.3787	154.3787	2.9600e-003	2.8300e-003	155.2961
Total		**0.0156**	**0.1418**	**0.1191**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**	**0.0000**	**154.3787**	**154.3787**	**2.9600e-003**	**2.8300e-003**	**155.2961**

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					
Motel	2.89295e+006	0.0156	0.1418	0.1191	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.3787	154.3787	2.9600e-003	2.8300e-003	155.2961
Total		**0.0156**	**0.1418**	**0.1191**	**8.5000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**	**0.0000**	**154.3787**	**154.3787**	**2.9600e-003**	**2.8300e-003**	**155.2961**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Motel	1.03957e+006	136.7464	0.0137	2.8300e-003	137.9313
Total		**136.7464**	**0.0137**	**2.8300e-003**	**137.9313**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Motel	1.03957e+006	136.7464	0.0137	2.8300e-003	137.9313
Total		**136.7464**	**0.0137**	**2.8300e-003**	**137.9313**

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	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Unmitigated	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1615					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Total	**0.7058**	**1.0000e-005**	**9.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.7700e-003**	**1.7700e-003**	**0.0000**	**0.0000**	**1.8900e-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	tons/yr										MT/yr					
Architectural Coating	0.1615					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Total	**0.7058**	**1.0000e-005**	**9.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.7700e-003**	**1.7700e-003**	**0.0000**	**0.0000**	**1.8900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.9160	0.5706	1.9700e-003	16.7678
Unmitigated	1.9160	0.5706	1.9700e-003	16.7678

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Motel	2.51131 / 0.279034	1.9160	0.5706	1.9700e-003	16.7678
Total		**1.9160**	**0.5706**	**1.9700e-003**	**16.7678**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Motel	2.51131 / 0.279034	1.9160	0.5706	1.9700e-003	16.7678
Total		**1.9160**	**0.5706**	**1.9700e-003**	**16.7678**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.0021	0.6502	0.0000	27.2573
Unmitigated	11.0021	0.6502	0.0000	27.2573

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Motel	54.2	11.0021	0.6502	0.0000	27.2573
Total		**11.0021**	**0.6502**	**0.0000**	**27.2573**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Motel	54.2	11.0021	0.6502	0.0000	27.2573
Total		**11.0021**	**0.6502**	**0.0000**	**27.2573**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

B2. CalEEMod Model Output for Woodstove Emissions

Under Canvas woodstoves emissions

Tuolumne County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Residential	99.00	Dwelling Unit	3.40	0.00	283

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	66
Climate Zone	1			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Avreage adjusted to match project.

Construction Phase - This run for woodstove emissions only. No construction.

Off-road Equipment - Woodstoves only.

Trips and VMT - Woodstoves only.

Woodstoves - Per PD, wood burning or pellet stoves.

Water And Wastewater -

Under Canvas woodstoves emissions - Tuolumne County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblFireplaces	NumberGas	54.45	0.00
tblFireplaces	NumberWood	34.65	0.00
tblLandUse	LotAcreage	0.00	3.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblWoodstoves	NumberCatalytic	4.95	50.00
tblWoodstoves	NumberNoncatalytic	4.95	0.00
tblWoodstoves	NumberPellet	0.00	49.00

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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 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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	1.1432	0.5944	6.1340	0.0299		0.9293	0.9293		0.9293	0.9293	200.1148	1.2008	201.3155	0.9352	0.0000	224.6944
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1432**	**0.5944**	**6.1340**	**0.0299**	**0.0000**	**0.9293**	**0.9293**	**0.0000**	**0.9293**	**0.9293**	**200.1148**	**1.2008**	**201.3155**	**0.9352**	**0.0000**	**224.6944**

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	1.1432	0.5944	6.1340	0.0299		0.9293	0.9293		0.9293	0.9293	200.1148	1.2008	201.3155	0.9352	0.0000	224.6944
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.1432**	**0.5944**	**6.1340**	**0.0299**	**0.0000**	**0.9293**	**0.9293**	**0.0000**	**0.9293**	**0.9293**	**200.1148**	**1.2008**	**201.3155**	**0.9352**	**0.0000**	**224.6944**

	ROG	NOx	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	8/7/2018	8/7/2018	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	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	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**

3.2 Site Preparation - 2018

Mitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	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**	**0.0000**	**0.0000**

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
User Defined Residential	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
User Defined Residential	10.80	7.30	7.50	37.30	20.70	42.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Residential	0.471330	0.050819	0.207818	0.162046	0.053743	0.008065	0.018819	0.011540	0.003291	0.001284	0.007070	0.001791	0.002386

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					
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Residential	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			
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Residential	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	1.1432	0.5944	6.1340	0.0299		0.9293	0.9293		0.9293	0.9293	200.1148	1.2008	201.3155	0.9352	0.0000	224.6944
Unmitigated	1.1432	0.5944	6.1340	0.0299		0.9293	0.9293		0.9293	0.9293	200.1148	1.2008	201.3155	0.9352	0.0000	224.6944

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1209	0.5859	5.3973	0.0299		0.9252	0.9252		0.9252	0.9252	200.1148	0.0000	200.1148	0.9340	0.0000	223.4645
Landscaping	0.0223	8.5000e-003	0.7367	4.0000e-005		4.0600e-003	4.0600e-003		4.0600e-003	4.0600e-003	0.0000	1.2008	1.2008	1.1600e-003	0.0000	1.2298
Total	**1.1432**	**0.5944**	**6.1340**	**0.0299**		**0.9293**	**0.9293**		**0.9293**	**0.9293**	**200.1148**	**1.2008**	**201.3155**	**0.9352**	**0.0000**	**224.6944**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.1209	0.5859	5.3973	0.0299		0.9252	0.9252		0.9252	0.9252	200.1148	0.0000	200.1148	0.9340	0.0000	223.4645
Landscaping	0.0223	8.5000e-003	0.7367	4.0000e-005		4.0600e-003	4.0600e-003		4.0600e-003	4.0600e-003	0.0000	1.2008	1.2008	1.1600e-003	0.0000	1.2298
Total	**1.1432**	**0.5944**	**6.1340**	**0.0299**		**0.9293**	**0.9293**		**0.9293**	**0.9293**	**200.1148**	**1.2008**	**201.3155**	**0.9352**	**0.0000**	**224.6944**

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			
User Defined Residential	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			
User Defined Residential	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			
User Defined Residential	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			
User Defined Residential	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 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C
USFWS, CDFW, and CNPS Species Lists

IPaC Information for Planning and Consultation **U.S. Fish & Wildlife Service**

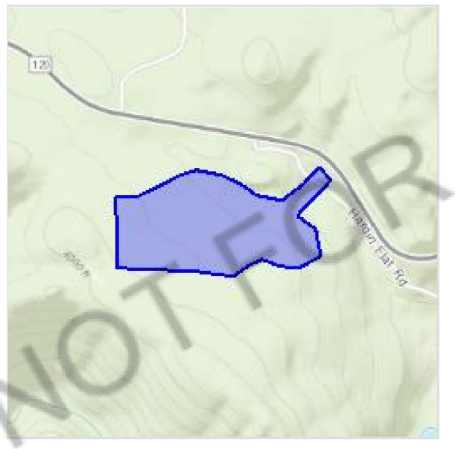
IPaC resource list

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

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

Location

Tuolumne County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

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

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

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

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

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

Listed species

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

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

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

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

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

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

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

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

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

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

Additional information can be found using the following links:

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

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

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

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
California Spotted Owl Strix occidentalis occidentalis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7266	Breeds Mar 10 to Jun 15
Olive-sided Flycatcher Contopus cooperi This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Williamson's Sapsucker Sphyrapicus thyroideus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8832	Breeds May 1 to Jul 31

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

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

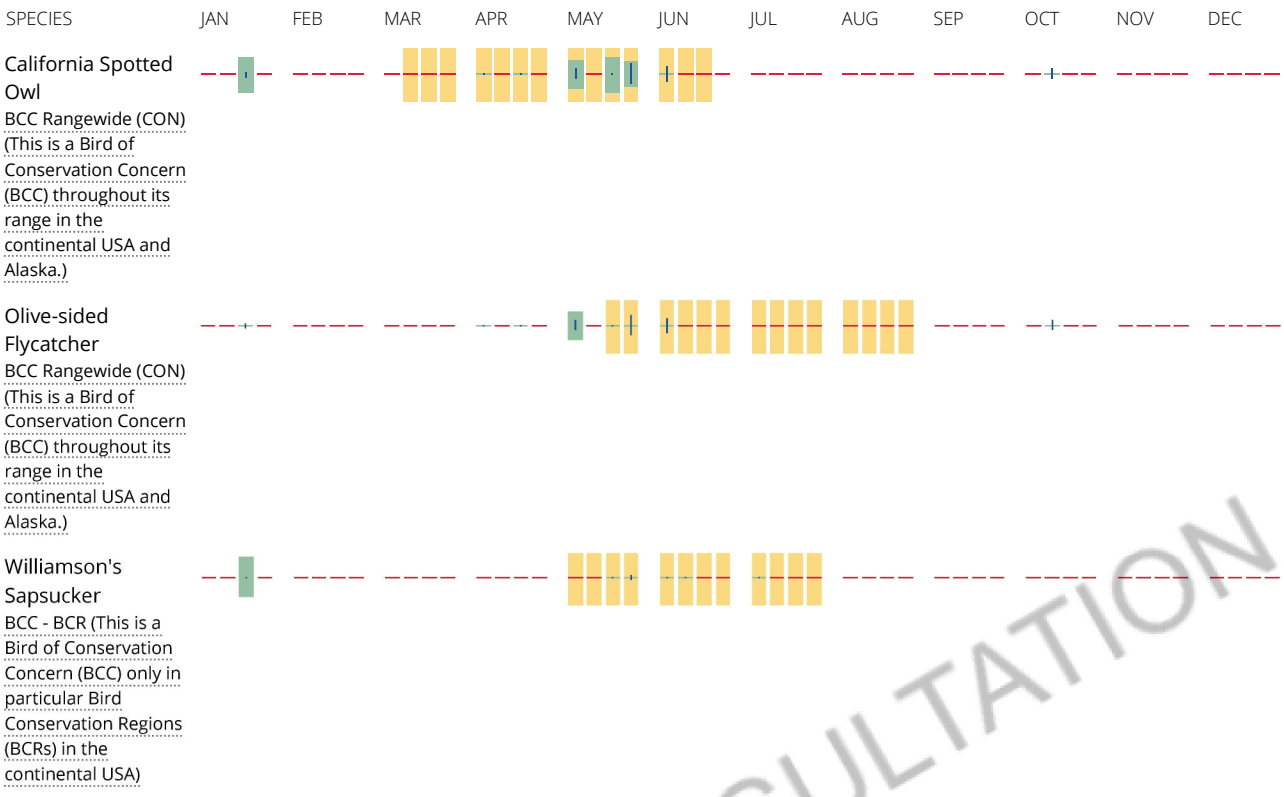
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

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

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

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

■ probability of presence ■ breeding season | survey effort – no data



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

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

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

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

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

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

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

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

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Ascension Mtn. (3711978) OR Cherry Lake South (3711988) OR Lake Eleanor (3711987) OR Ackerson Mtn. (3711977) OR El Portal (3711967) OR Kinsley (3711968) OR Buckhorn Peak (3712061) OR Jawbone Ridge (3712071) OR Duckwall Mtn. (3712081))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agrostis humilis mountain bent grass	PMPOA040P0	None	None	G4Q	S2	2B.3
Allium tribracteatum three-bracted onion	PMLIL022D0	None	None	G2	S2	1B.2
Allium yosemitense Yosemite onion	PMLIL022L0	None	Rare	G3	S3	1B.3
Anaxyrus canorus Yosemite toad	AAABB01040	Threatened	None	G2G3	S2S3	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Aplodontia rufa californica Sierra Nevada mountain beaver	AMAFA01013	None	None	G5T3T4	S2S3	SSC
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Banksula tuolumne Tuolumne cave harvestman	ILARA14090	None	None	G1	S1	
Big Tree Forest Big Tree Forest	CTT84250CA	None	None	G3	S3.2	
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Brasenia schreberi watershield	PDCAB01010	None	None	G5	S3	2B.3
Calicina conifera Crane Flat harvestman	ILARAU8030	None	None	G1	S1	
Carex limosa mud sedge	PMCYP037K0	None	None	G5	S3	2B.2
Carex tompkinsii Tompkins' sedge	PMCYP03DR0	None	Rare	G3G4	S3S4	4.3
Carex viridula ssp. viridula green yellow sedge	PMCYP03EM5	None	None	G5T5	S2	2B.3
Cinna bolanderi Bolander's woodreed	PMPOA1H040	None	None	G2G3	S2S3	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Clarkia australis Small's southern clarkia	PDONA05040	None	None	G2	S2	1B.2
Clarkia biloba ssp. australis Mariposa clarkia	PDONA05051	None	None	G4G5T3	S3	1B.2
Clarkia lingulata Merced clarkia	PDONA050P0	None	Endangered	G1	S1	1B.1
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Diplacus pulchellus yellow-lip pansy monkeyflower	PDSCR1B280	None	None	G2	S2	1B.2
Empidonax traillii willow flycatcher	ABPAE33040	None	Endangered	G5	S1S2	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eriophyllum congdonii Congdon's woolly sunflower	PDAST3N030	None	Rare	G2	S2	1B.2
Eriophyllum nubigenum Yosemite woolly sunflower	PDAST3N0A0	None	None	G2	S2	1B.3
Erythranthe filicaulis slender-stemmed monkeyflower	PDSCR1B150	None	None	G2	S2	1B.2
Erythronium taylorii Pilot Ridge fawn lily	PMLIL0U0S0	None	None	G1	S1	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 peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Helminthoglypta allynsmithi Merced Canyon shoulderband	IMGASC2020	None	None	G1	S1	
Horkelia parryi Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
Hulsea brevifolia short-leaved hulsea	PDAST4Z020	None	None	G3	S3	1B.2
Hydromantes brunus limestone salamander	AAAAD09010	None	Threatened	G2G3	S2S3	FP
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G5	S3S4	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lasiurus blossevillii western red bat	AMACC05060	None	None	G5	S3	SSC
Lasiurus cinereus hoary bat	AMACC05030	None	None	G5	S4	
Lewisia congdonii Congdon's lewisia	PDPOR04040	None	Rare	G2	S2	1B.3
Lomatium congdonii Congdon's lomatium	PDAPI1B0B0	None	None	G2	S2	1B.2
Margaritifera falcata western pearlshell	IMBIV27020	None	None	G4G5	S1S2	
Mielichhoferia elongata elongate copper moss	NBMUS4Q022	None	None	G5	S4	4.3
Mielichhoferia shevockii Shevock's copper moss	NBMUSA1010	None	None	G2	S2	1B.2
Monadenia yosemitensis Yosemite Mariposa sideband	IMGASZ3010	None	None	G1	S1S2	
Myotis evotis long-eared myotis	AMACC01070	None	None	G5	S3	
Myotis thysanodes fringed myotis	AMACC01090	None	None	G4	S3	
Myotis volans long-legged myotis	AMACC01110	None	None	G5	S3	
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Orthotrichum holzingeri Holzinger's orthotrichum moss	NBMUS560E0	None	None	G3	S2	1B.3
Pekania pennanti fisher - West Coast DPS	AMAJF01021	None	Threatened	G5T2T3Q	S2S3	SSC
Picoides arcticus black-backed woodpecker	ABNYF07090	None	None	G5	S2	
Plagiobothrys torreyi var. torreyi Yosemite popcornflower	PDBOR0V152	None	None	G4T3Q	S3	1B.2
Potamogeton epihydrus Nuttall's ribbon-leaved pondweed	PMPOT03080	None	None	G5	S2S3	2B.2
Potamogeton robbinsii Robbins' pondweed	PMPOT030Z0	None	None	G5	S3	2B.3
Rana boylii foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Rana sierrae Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G1	S1	WL

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Rhynchospora capitellata brownish beaked-rush	PMCYP0N080	None	None	G5	S1	2B.2
Schoenoplectus subterminalis water bulrush	PMCYP0Q1G0	None	None	G4G5	S3	2B.3
Stellaria obtusa obtuse starwort	PDCAR0X0U0	None	None	G5	S4	4.3
Strix nebulosa great gray owl	ABNSB12040	None	Endangered	G5	S1	
Stygobromus wengerorum Wengerors' Cave amphipod	ICMAL05620	None	None	G1	S1	
Tetrix sierrana Sierra pygmy grasshopper	IIORT27010	None	None	G1G2	S1S2	
Vulpes vulpes necator Sierra Nevada red fox	AMAJA03012	Candidate	Threatened	G5T1T2	S1	

Record Count: 67

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

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

Search Criteria

Found in Quads 3712081, 3711988, 3711987, 3712071, 3711978, 3711977, 3712061 3711968 and 3711967;

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

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Agrostis humilis	mountain bent grass	Poaceae	perennial herb	Jul-Sep	2B.3	S2	G4Q
Allium sanbornii var. sanbornii	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S3S4	G4T3T4
Allium tribracteatum	three-bracted onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
Allium yosemitense	Yosemite onion	Alliaceae	perennial bulbiferous herb	Apr-Jul	1B.3	S3	G3
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Bolandra californica	Sierra bolandra	Saxifragaceae	perennial herb	Jun-Jul	4.3	S4	G4
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
Bulbostylis capillaris	thread-leaved beakseed	Cyperaceae	annual herb	Jun-Aug	4.2	S3	G5
Carex buxbaumii	Buxbaum's sedge	Cyperaceae	perennial rhizomatous herb	Mar-Aug	4.2	S3	G5
Carex limosa	mud sedge	Cyperaceae	perennial rhizomatous herb	Jun-Aug	2B.2	S3	G5
Carex tompkinsii	Tompkins' sedge	Cyperaceae	perennial rhizomatous herb	May-Jul	4.3	S3S4	G3G4
Carex viridula ssp. viridula	green yellow sedge	Cyperaceae	perennial herb	(Jun)Jul-Sep(Nov)	2B.3	S2	G5T5
Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3	S4	G4
Cinna bolanderi	Bolander's woodreed	Poaceae	perennial herb	Jul-Sep	1B.2	S2	G2
Clarkia australis	Small's southern clarkia	Onagraceae	annual herb	May-Aug	1B.2	S2	G2
	Mariposa clarkia	Onagraceae	annual herb	Apr-Jul	1B.2	S2S3	G4G5T2T3

Clarkia biloba ssp. australis							
Clarkia lingulata	Merced clarkia	Onagraceae	annual herb	May-Jun	1B.1	S1	G1
Clarkia virgata	Sierra clarkia	Onagraceae	annual herb	May-Aug	4.3	S3	G3
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Cordylanthus rigidus ssp. brevibracteatus	short-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug (Oct)	4.3	S3	G5T3
Cypripedium montanum	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
Diplacus pulchellus	yellow-lip pansy monkeyflower	Phrymaceae	annual herb	Apr-Jul	1B.2	S2	G2
Eriophorum gracile	slender cottongrass	Cyperaceae	perennial rhizomatous herb (emergent)	May-Sep	4.3	S4	G5
Eriophyllum congdonii	Congdon's woolly sunflower	Asteraceae	annual herb	Apr-Jun	1B.2	S2	G2
Eriophyllum nubigenum	Yosemite woolly sunflower	Asteraceae	annual herb	May-Aug	1B.3	S2	G2
Erythranthe filicaulis	slender-stemmed monkeyflower	Phrymaceae	annual herb	Apr-Aug	1B.2	S2	G2
Erythranthe inconspicua	small-flowered monkeyflower	Phrymaceae	annual herb	May-Jun	4.3	S4	G4
Erythranthe laciniata	cut-leaved monkeyflower	Phrymaceae	annual herb	Apr-Jul	4.3	S4	G4
Erythronium taylorii	Pilot Ridge fawn lily	Liliaceae	perennial bulbiferous herb	Apr-May	1B.2	S1	G1
Erythronium tuolumnense	Tuolumne fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jun	1B.2	S2S3	G2G3
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.2	S2	G2
Hulsea brevifolia	short-leaved hulsea	Asteraceae	perennial herb	May-Aug	1B.2	S3	G3
Jensia yosemitana	Yosemite tarplant	Asteraceae	annual herb	(Apr)May-Jul	3.2	S3	G3
Lewisia congdonii	Congdon's lewisia	Montiaceae	perennial herb	Apr-Jun	1B.3	S2	G2
Lomatium congdonii	Congdon's lomatium	Apiaceae	perennial herb	Mar-Jun	1B.2	S2	G2
Lupinus spectabilis	shaggyhair lupine	Fabaceae	annual herb	Apr-May	1B.2	S2	G2
Lycopus uniflorus	northern bugleweed	Lamiaceae	perennial herb	Jul-Sep	4.3	S4	G5
Mielichhoferia elongata	elongate copper moss	Mielichhoferiaceae	moss		4.3	S4	G5
Mielichhoferia shevockii	Shevock's copper moss	Mielichhoferiaceae	moss		1B.2	S2	G2

Orthotrichum holzingeri	Holzinger's orthotrichum moss	Orthotrichaceae	moss		1B.3	S2	G3
Piperia colemanii	Coleman's rein orchid	Orchidaceae	perennial herb	Jun-Aug	4.3	S4	G4
Plagiobothrys torreyi var. perplexans	chaparral popcornflower	Boraginaceae	annual herb	Apr-Sep	4.3	S3?	G4T3?
Plagiobothrys torreyi var. torreyi	Yosemite popcornflower	Boraginaceae	annual herb	Apr-Jun	1B.2	S3	G4T3Q
Potamogeton epihydrus	Nuttall's ribbon-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	(Jun)Jul-Sep	2B.2	S2S3	G5
Potamogeton robbinsii	Robbins' pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	Jul-Aug	2B.3	S3	G5
Pseudostellaria sierrae	Sierra starwort	Caryophyllaceae	perennial rhizomatous herb	May-Aug	4.2	S3	G3G4
Rhynchospora californica	California beaked-rush	Cyperaceae	perennial rhizomatous herb	May-Jul	1B.1	S1	G1
Rhynchospora capitellata	brownish beaked-rush	Cyperaceae	perennial herb	Jul-Aug	2B.2	S1	G5
Schoenoplectus subterminalis	water bulrush	Cyperaceae	perennial rhizomatous herb (aquatic)	Jun-Aug (Sep)	2B.3	S3	G4G5
Stellaria obtusa	obtuse starwort	Caryophyllaceae	perennial rhizomatous herb	May-Sep (Oct)	4.3	S4	G5
Wyethia elata	Hall's wyethia	Asteraceae	perennial herb	May-Aug	4.3	S4	G4

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 10 September 2018].

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March 4, 2019

Natalie Rizzi, Planner
Community Resources Agency
2 South Green St.
Sonora, CA 95370

RE: Site Development Permit SDP 18-002 – "YOSEMITE UNDER CANVAS"

To Natalie and others at the Community Resources Agency:

CSERC staff has carefully reviewed the Initial Study/Mitigated Negative Declaration for the Site Development Permit (SDP 18-002) regarding the proposed "Yosemite Under Canvas" project at Hardin Flat Road and Highway 120. While a tent camping facility may be strategically designed to minimize noise and scenic impacts, and to be constructed in a manner that minimizes direct impacts to at-risk biological resources, the proposal to place this project on an extreme fire-risk site without public water or public sewer capacity raises red flags of concern. Unfortunately, rather than address these key issues, the environmental analysis is flawed to such an extensive degree that the current Initial Study/Mitigated Neg Dec fails to comply with CEQA requirements or to reduce the potential for impacts to less than significant.

As now proposed, the "Yosemite Under Canvas" project must be judged to result in significant negative impacts due to the failure of the environmental analysis to address the most important potential impacts or to provide feasible mitigation for them. In particular, **the IS/MND fails to accurately and thoroughly address: (1) the site's extreme wildfire risk; (2) the lack of any surface water or public water supply or even an adequate groundwater supply that can be assured during drought periods; (3) the failure of the IS/MND to address the cumulative impacts of the project on essential public services that must be supplied by Tuolumne County; (4) the potential for the proposed large-scale septic system (that would serve nearly 300 people per day) to contaminate groundwater; (5) the potential for the project to create local air quality issues due to as many as 99 woodstoves along with two fire pits that could all be producing smoke/particulate matter on a daily basis; (6) and the failure of the environmental analysis to address the cumulative impacts of this proposed project combined with, not just the Terra Vi Lodge, but also the proposed major expansion of the Thousand Trails Yosemite Lakes RV Park's capacity as well as the construction of the Berkeley-Tuolumne Camp project that has just been approved.**

For all of these reasons, the flawed Initial Study/Mitigated Neg Dec cannot be relied upon as the basis for approval of this project. Either an EIR must be required to provide a reasonable range of alternatives to the proposed project and to consider in depth measures to reduce the project's potential signifcant impacts, or the IS/MND must be substantially revised and expanded to cover the

many major gaps in analysis that currently exist and to provide new, feasible mitigation measures for the many potential significant impacts that cannot be ignored.

CSERC asks that the Mitigated Neg Dec be substantially expanded and revised to fill in the gaps in essential information, that new, feasible mitigation measures be developed, and that the highly revised IS/MND then be distributed again for public and agency review prior to any County consideration of approval for the project.

THE PROJECT

As currently proposed, this "glamping" project would result in the placement of 99 tent camping units and associated kitchen and bathroom facilities in the midst of a currently-vacant forested site. The project is apparently aiming to market to those who will be traveling to the area to visit Yosemite National Park (hence the name "Yosemite Under Canvas", when in fact the project is neither within Yosemite Park nor is the project at a location where Yosemite is easily visible from the property).

Within the 80-acre project site, customers would occupy canvas tents that would be distributed across much of the western and southwestern portions of the site. Of the 99 tents, occupants of 77 "Deluxe" tents would have private bathrooms, while occupants of 22 "Safari" tents would utilize communal bathroom facilities that the Neg Dec describes as mobile facilities on wheels.

Despite the Environmental Checklist and the description of the project and measures intended to reduce environmental impacts, **the IS/MND fails to identify the high degree of environmental risk that is tied to constructing a large-scale lodging operation on a site with no public water, no public sewer system, extreme fire risk, no nearby emergency services or medical services, and other issues and concerns**. Furthermore, as will be spelled out in these comments, the environmental analysis repeatedly fails to address potentially significant environmental impacts by shifting the written discussion to subject matter that sidesteps the true issues of importance.

SPECIFIC COMMENTS

1) THIS PROJECT SITE IS ONE WITH EXTREME FIRE RISK, YET THE PROJECT IS PROPOSED WITHOUT REQUIRING ALL FEASIBLE MITIGATION MEASURES TO RESPOND TO THE RISK

Tuolumne County has a responsibility not to approve residential or tourist-serving development at a location where a "Camp Fire" type of conflagration would pose a substantial risk for the loss of human life. Concentrating lodging customers on a flammable, forested site where there is a reasonable risk for a high severity wildfire contradicts strongly-worded desires for public safety that were espoused by Tuolumne County supervisors following 2018 wildfire events in the state.

This site has already been proven to be an extremely high-fire-risk site. "Approximately 20.1 acres of the site were completely burned in 2013 during the Rim Fire." "Due to the recent wildfire history of the project site, much of the mixed conifer forest community in the project site is disturbed and does not support plant densities and diversity typical of undisturbed examples of this community type. Many trees within the project site were burned during the wildfires." Pg. 24 Neg Dec

Because this site has highly flammable fuels, a proven history of burning intensely, extensive areas of untreated flammable fuels surrounding the site, and no closeby fire protection crews

stationed to respond to any threatening wildfire, this site is one of the least defensible sites of all of the development projects that have been proposed in Tuolumne County over recent decades.

Under "Public Services" on page 75 of the IS/MND, the document assures that fire protection is provided to the project site by the County Fire Department. However, the document also notes that the closest fire station is located in Groveland, 15 miles to the west of the project site. Should the two engine crews at that County fire station be already responding elsewhere to a fire or emergency situation at a time when a fire threatens the Under Canvas glamping site, the next responding County fire crew would be driving from the Sonora area, which would result in a 35-40 minute response time. **Furthermore, even if the two Groveland station engine crews are available for a prompt fire response, those engine crews' capacity is limited to the ability to respond to a structure fire – not to attempt to defend campers and staff from an approaching wildfire at a forested site with 99 tent cabins, administrative tent facilities, and no safety retreat zone.** While "Under Canvas" may have eight facilities elsewhere that the company manages, it is unlikely that the company has ever proposed construction of an "Under Canvas" operating facility on a site that has been recently severely burned by a major wildfire less than six years previously.

A significant fire risk at this site is not just a possibility. It is a proven fact. The IS/MND inappropriately ignores the risk of a wildfire burning onto the site from the surrounding highly flammable forest. The trees and surface vegetation both in surrounding areas and on this site along with the proposed 99 tent cabins will all be highly flammable fuel if any windblown conflagration flares up and whips flames across the property.

The bottom line is that the IS/MND fails to accurately assess the risk of a high-severity wildfire burning onto the project site and threatening campers and staff. Under extremely smoky, windy conditions, visitors staying at the camp who might face a rapidly approaching wall of flames would not be expected to act like seasoned residents of fire-prone areas who might carefully pack up and evacuate in a manner that would result in the least risk. Instead, short term transient occupants may include those who do not even speak English or who may be highly unprepared for any wildfire threat. All of this combines to create a measurable risk to public safety if this project is approved at this site.

CSERC asserts that a revised IS/MND is needed to carefully analyze the actual risk to the site of another Rim Fire-type wildfire sweeping across the site. The IS/MND should spell out what mitigation measures, if any, will realistically reduce the significant risk of such a threat if this project is approved to allow up to 300 people per day to occupy this site. (For instance, will there be a 30,000-gallon water tank with all appropriate nozzle connections required to be accessible for any engine crews arriving to fight a fire?

The IS/MND should accurately assess the potential inability of the current County Fire Department crew stationed at Groveland to always be available to respond to a fire at this site. Accordingly, the IS/MND should address whether additional funds contributed by the project applicants on an annual basis or on a one-time basis are needed to simply respond to the risk of a project-induced fire igniting on the project site, which is the only fire that a County Fire Department crew would realistically have the ability to contain. Additional funding to be applied toward addressing the wildfire threat coming onto the site from outside the property should also be considered in the revised IS/MND.

2) WOODSTOVES, FIRE PITS WOULD ADD FIRE RISK AND WOULD GENERATE AIR POLLUTANTS

It is understandable that woodstoves are proposed for each of the tent units for esthetic and marketing reasons, and it is also understandable that two main fire pits would be created to serve as a centerpiece for evening gatherings or other purposes. Those coming to a forested environment for a glamour camping experience will want to be warmed by the woodstoves during cold, rainy, or snowy weather and may also simply want to burn a fire in their tent's woodstove because campfires are associated by many with the concept of camping.

Accordingly, despite the often-warm or hot weather that will occur during much of the project's operating season that is described as running from March to October, the analysis must consider the realistic possibility that often most of the 99 woodstoves may be in use, especially during evenings and overnight hours whenever there is cool or cold weather. Having unskilled, often uninformed short-term transient use tent occupants operating woodstoves will always pose some level of risk for igniting flammable fuel within a tent unit, igniting the tent, and causing embers or flames to spread fire onto the project site. But fire risk from the woodstoves is not the highest risk.

Of greater realistic concern for the analysis of the project's environmental impacts is the assured risk of having up to 99 woodstoves all burning simultaneously. Their combined smoke output will have high potential to generate a significant amount of overall smoke and particulate matter that will cause air quality impacts within the general area. The IS/MND dismisses any concern due to the fact that there are few residents of the immediate area to breathe in the smoke. However, if this project is approved, up to 300 occupants of the site on any given day and night will all be exposed to the concentrated smoke from up to 99 woodstoves within the project site. In addition, hundreds of visitors to a potential Terra Vi Lodge across the street would also be exposed to the smoke levels.

The IS/MND is defective due to its failure to accurately describe either the fire risk from having up to 99 woodstoves operating on the site in the midst of potentially severe fire season conditions, as well as the failure to address in any way the air quality emissions of so many closely associated wood stoves burning simoultaneously. Simply concentrating so many woodstoves on the project site poses potential for occupants of the site to inhale unhealthy levels of smoke with high levels of fine particulates that pose significant health risks.

The supplemental or revised IS/MND should (a) analyze and discuss the risk that woodstoves pose for igniting a wildfire at the project site if 99 woodstoves are allowed, and (b) it should also analyze in the Air Quality section the potentially significant health impacts for site occupants to be exposed for prolonged periods to smoke from up to 99 stoves (and two fire pits) all producing wood smoke and air quality contamination, especially PM 2.5 and PM 10 pollutants. Appropriate, feasible mitigation measures should be considered and spelled out for possible adoption if project approval is considered.

3) THE IS/MND FAILS TO ACCURATELY ASSESS IMPACTS OF HAVING NO PUBLIC WATER SUPPLY

Page 8 of the IS/MND shows that preliminary analysis of water use results in an estimated need for 8,050 gallons per day in addition to the 70,000 gallons that would be needed to fill the swimming pool at the start of the 8-month season. Assuming 240 days as the March-October season of operation, the project projects a water supply demand of almost exactly 2,000,000 gallons a year.

Yet the IS/MND appears to indicate that there has not even been well testing done to date on the property. Instead, on page 61 of the IS/MND, the text reveals that a test well "will be constructed" and if the test well "is not successful, then Under Canvas will consider purchasing water from a licensed facility and hauling water."

It is a highly significant negative impact for a project to be based on the supposition that if no water supply is assured on the project site, that the applicants will just go out and purchase water and have it trucked to the site. First and foremost, **without control over the water rights for wherever the water is purchased, the "Under Canvas: project applicants cannot possibly assure that there will be a sustainable amount of water available for purchase to maintain the proposed project**. **THIS WATER SUPPLY UNCERTAINTY, BY ITSELF, SHOULD BE ENOUGH FOR THE COUNTY TO REJECT THIS APPLICATION AS PREMATURE AND TO REJECT THE ADEQUACY OF THE IS/MND.**

Furthermore, the IS/MND unprofessionally makes the false claim that "…the proposed project would result in a **less-than-significant** impact related to the depletion of groundwater supplies or interference with groundwater recharge." That claim cannot accurately be made because the consultants and project applicants have no clue as to what a test well result may show as to adequacy of groundwater beneath the surface of the project site. Instead, an accurate statement would be that: "Due to a projected estimated water supply demand of two million gallons per year or 8,050 gallons per day for project operations on the site, the proposed project may a significant impact to groundwater beneath the surface of the project site."

There is no accurate or valid way for the IS/MND to dismiss the potential for a significant negative water supply impact since there is neither any assured water supply shown to be proven on the site, nor is there any evidence that a well that is pumped to produce 2,000,000 gallons per year will not likely fail during drought periods.

Simply on this one issue alone, it is both premature and irresponsible for this project to be put forward for potential project approval despite the lack of essential information and the speculative nature of how the single most important resource for project operation may or may not be available.

Finally, the IS/MND completely fails to discuss the risk to groundwater that would be a cumulative impact due to the Terra Vi Lodge project across the street to also propose to develop a major lodging facility for hundreds of customers and staff per day, all based on the successful drilling of wells to access surface water that may underlie both the Under Canvas project site and the Terra Vi Lodge project site.

The IS/MND should fully acknowledge that without a proven, high output well on site and without significant water storage onsite, the project cannot sustainably provide required water in drought periods for the scale of operations now proposed on the site. In addition, pumping 2,000,000 gallons or more per year from a well would result in the potential for groundwater to be significantly diminished beneath the property. Accordingly, to reduce the significant negative impacts of the proposed project, the project should only be approved if well testing shows that the groundwater supply is of such quantity that it is likely to be sustainable despite 2,000,000 gallons per year water demand from the project, even in periods of multi-year drought.

4) THERE IS POTENTIAL SIGNIFICANT EFFECTS DUE TO RELIANCE ON AN UNPROVEN SEPTIC SYSTEM

On page 83 of the IS/MND, the consultants acknowledge that all wastewater generated by the project will be domestic sewage. "Wastewater will be treated on-site through the use of a septic tank for storage and settling and a leach field for disposal." "…the proposed projects will comply with all the wastewater requirements of the CVRWQCB… therefore, this impact is considered **less than significant**."

That entire logic thread is irrational and legally inadequate. First, there is no description in the entire IS/MND that having as many as 300 people per day on the project site, with all of their human waste and wastewater produced, along with their shower water, in combination with 1,100 gallons a day of laundry water as well as 1,500 gallons per day of kitchen/food preparation water demand will total up to roughly 2,000,000 gallons of wastewater per year for a septic system.

Second, not only does the IS/MND fail to provide any thorough description or analysis of the septic system's threat to groundwater, but there is no alternative wastewater treatment option described in the event that the septic system either fails or functions poorly and is found to contaminate soil and groundwater beyond the extent of the leach fields. The IS/MND cannot simply state that wastewater treatment will comply with Regional Water Board requirements, because the over-stretched Regional Water Board does not have the capacity to actively engage in the construction of, maintenance of, and monitoring of all of the septic systems within the vast region.

Of greatest concern is the risk that an engineered septic system will be properly constructed and that the facility will be approved and operated, yet contamination from the septic system will still potentially occur during wet periods of the year when forest soils are fully saturated (March, April, and often May, at times in a portion of June and again in some years during September and October). There is no option for project customers and staff to avoid going to the bathroom, taking showers, etc. and producing many tens of thousands of gallons of wastewater each week. If the soils on the site, even with the addition of sand trenches, do not fully and adequately treat the wastewater, this project could be an ecological disaster for not just the not-yet-drilled well that will be the pivotal water supply for the project, but also for existing parcel owners to the north of the site who rely entirely on relatively shallow wells for their own water needs.

A revised IS/MND should fully and accurately acknowledge that the proposal to rely entirely on an engineered septic system for wastewater produced by up to 300 people per day is a proposal that will result in a significant risk for contamination of groundwater and wells if at any point the septic system fails to fully treat pathogenic bacteria from the wastewater.

If there is an alternative option envisioned by project applicants, that alternative to the "likely to fail at some point" septic system proposal should be fully discussed in the IS/MND.

5) THE IS/MND FAILS TO ADEQUATELY ANALYZE THE CUMULATIVE IMPACTS OF THE PROJECT IN COMBINATION WITH OTHER PROPOSED, OR APPROVED-BUT-NOT-YET-CONSTRUCTED PROJECTS

This project will contribute toward a significant negative cumulative impact when considered in combination with the just approved Berkeley Tuolumne Camp Restoration and Reconstruction Project, with the Terra Vi Lodge project proposed across the highway from the project site, and with the proposed expansion of recreational camping and RV sites at the Thousand Trails Yosemite Lakes RV Park and Campground at Hardin Flat. Together the four total projects within the general Hardin

Flat area would bring an additional 1,000 or more people a day to the rural area that lacks any county service infrastructure, that has no close-by fire or ambulance service, and that is along a scenic corridor that already has periods of extremely high traffic on Highway 120 during the peak tourist season when each of the four projects will create the highest level of traffic and visitation.

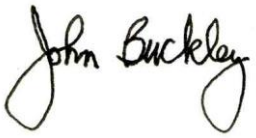
The IS/MND on page 86 incorrectly states that the past, present, and reasonably forseeable future conditions of the project site vicinity were considered for cumulative analysis, but neither the Hardin Flat Thousand Trails Yosemite Lakes RV expansion nor the construction of the Berkeley-Tuolummne Camp facility are even listed or mentioned in the analysis. In addition, although there is brief mention of the 240-unit Terra Vi Lodge project that is proposed for property across the highway, there is no mention in the IS/MND of the potential cumulative effects of that project's proposed wastewater treatment by septic system and that project's proposed supply of water by wells – both of which would add cumulatively to the potential for negative impacts associated with the Under Canvas project.

A revised IS/MND is necessary to expand analysis, provide all feasible mitigation measures to reduce the risk of potentially significant impacts, and to assess whether locating this project at an alternative location such as the Groveland/Big Oak Flat scar property (which is on the market and available) would feasibly eliminate almost all significant impacts that would be caused if this project is to be built.

For all of the reasons described above, **it appears that this Site Development Permit application is premature for any consideration for approval. Essential information is missing. Feasible mitigation measures are not identified nor required. Alternative site locations or project modifications are not presented** as options to reduce the significant effects of the project as now proposed.

Accordingly, CSERC respectfully urges the County to require a major revision of the IS/MND that appropriately fills in missing important information and that responds to the points raised in this comment letter in order to meet the clear intent of CEQA.

Respectfully submitted,



John Buckley
Executive Director

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March 6, 2019

Natalie Rizzi, Planner
Community Resources Agency
2 South Green St.
Sonora, CA 95370

RE: Site Development Permit SDP 18-002 – HARDIN FLAT, LLC ("YOSEMITE UNDER CANVAS")

To Natalie and others at the Community Resources Agency:

CSERC has received the Updated Notice Language clarifying that a proposal to rezone additional areas of the Hardin Flat, LLC "Under Canvas" project site to Open Space should not have been included in the noticing language for the project description.

We understand that the IS/MND does not need to be revised as rezoning to Open Space was not included in that document or required as mitigation.

With this comment letter our Center agrees that we do not see the project as likely to create a significant risk for negative impacts to plant or wildlife resources based on the project description and the mitigation measures planned for the project.

However, CSERC's staff biologists do see the Hardin Flat, LLC "Under Canvas" project as posing a high degree of significant risk to groundwater resources and surface water resources at the site due to the plan for the project to draw 2,000,000 gallons per year from a well on the site and also then producing roughly 2,000,000 gallons of wastewater per year at the site with no public sewer available, leaving only an engineered septic system to treat the huge amount of wastewater onsite.

CSERC also continues to press strong concern that this project location is a site with proven risk of high severity wildfire that could threaten on-site guests and staff if a wind-driven wildfire should sweep across the site (as happened in 2013). In addition, the proposal to approve 99 woodstoves and two fire pits dramatically increases the risk for a fire to ignite on the project site and then spread offsite to threaten neighboring residences or close-by recreational facilities.

Furthermore, CSERC continues to point out that the IS/MND fails to accurately describe or consider the significance of the cumulative impacts of this “Under Canvas” project combined with the proposed Terra Vi Lodge project, the proposed expansion of the Thousand Trails Yosemite Lakes RV Park, and the newly approved construction of the Berkeley-Tuolumne Camp facility adjacent to the Thousand Trails Yosemite Lakes site. Taken together, the additional demands on groundwater, the additional combined threats to water quality due to septic system failures, the additional combined amount of local traffic, the additional amount of GHG emissions, and the cumulative effects of all of the projects and their impacts on air quality are all key topics that are mostly ignored by the IS/MND and for which no mitigation measures were identified as necessary. In addition, the IS/MND fails to address the cumulative strain on County services that would be created by the combined facilities as now proposed.

For all of these reasons, despite the project realistically not posing a significant risk to plants or wildlife, CSERC reaffirms our strong concern over the numerous significant risks that this project will pose to the affected environment and our concern over the inadequacy of the IS/MND analysis and pertinent mitigation measures.

John Buckley, executive director

March 6, 12019

Natalie Rizzi, Planner
NRizzi@co.tuolumne.ca.us
Community Resources Agency
2 South Green Street
Sonora, CA 95370

RE: Initial Study/Mitigated Neg. Dec. - Yosemite Under Canvas Project

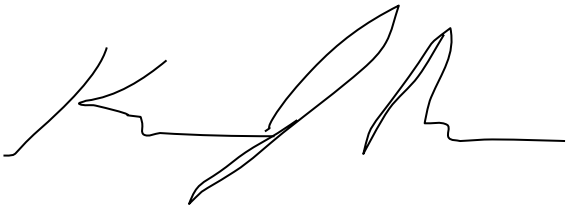
Thank you for the opportunity to provide comments on this IS/MND. After reviewing this IS/MND, we have significant concerns about potential environmental impacts. Our concerns include:

1. This project is not connected to any public sewer system. The idea that an unproven and poorly described septic system will be able to accommodate the estimated two million gallons of effluent annually generated by this many people is optimistic, to say the least. This could be especially problematic during wet seasons when the soils are saturated. This is a huge problem for this project.
2. Similarly, this project is not connected to public water. As noted in the report, this project is located in an area where there are no aquifers and "*subsurface material consists primarily of impermeable granitic and greenstone bedrock which can result in a low groundwater yield*" and "*The characteristics of the fractured rock and weather fluctuations have led to some wells providing unreliable sources of water"*. There is no evidence in this project description that the wells proposed will be adequate or even marginally functional during an extended drought (and there **will** be more multi-year droughts!). The idea that two million gallons of water will be trucked in each year if the proposed wells are not productive is completely unrealistic.
3. Issues of vulnerability to wildfire are another big negative factor in this proposal. This is an area where the Rim fire was able to burn unimpeded despite intense containment efforts. Allowing the development of a facility that puts a large number of tourists at risk into this high fire severity landscape in the middle of summer is really unconscionable especially given that the closest fire crews are in Groveland (15 miles away).
4. Although the IS/MND dismisses any air quality issues, it is hard to believe that this dense concentration of almost 100 woodstoves will not create some real smoke problems, especially if the stoves are not run properly (by inexperienced glampers) and are using softwood fuels.

These are some of the reasons that we feel the current IS/MND is not legally adequate. The current IS/MND needs to be significantly revised with new effective mitigation procedures. After this thorough revision the revised IS/MND should be subject to further public review and input.

Thank you again for allowing us to comment on this project. Please notify us of IS/MND revisions and future public hearings on this project as well as the availability of any environmental documents.

Thank you,



Dr. Kevin J. Rice
Conservation Chair
Tuolumne Group – Sierra Club
PO Box 4440
Sonora CA 95370

Luke Evans

From: Natalie Rizzi <NRizzi@co.tuolumne.ca.us>
Sent: Friday, March 15, 2019 11:37 AM
To: Joshua Boldt
Subject: FW: Hardin Flat, LLC Site Development Permit SDP18-002 (SCH#2019029073)

And this comment as well.

Natalie Rizzi
Tuolumne County Planner
Community Resources Agency
Office: (209) 533-5936
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Email: nrizzi@co.tuolumne.ca.us

From: Ferreria, Austin P.@Waterboards [mailto:Austin.Ferreria@Waterboards.ca.gov]
Sent: Thursday, March 14, 2019 12:38 PM
To: Natalie Rizzi
Cc: Chauhan, Kassy@Waterboards
Subject: Hardin Flat, LLC Site Development Permit SDP18-002 (SCH#2019029073)

Ms. Rizzi,

After reviewing the documents that were provided, the Division of Drinking Water understands that the proposed development has been identified a 99 unit luxury tent campground site, mobile kitchen, dining and reception tent, swimming pool, and other supporting buildings. Therefore, the development will be designated as a public water system and will be required to obtain a water supply permit. Please be advised that the water system will be required to follow the SB 1263 process before it is able to become its own water system.

Very Respectfully,

Austin Ferreria
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SoCal Drinking Water Field Operations Branch
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May 14, 2019

Via Electronic Mail Only

Natalie Rizzi
Community Resources Agency
2 South Green Street
Sonora, California 95370

Re: Under Canvas Mitigated Negative Declaration and Initial Study

Dear Ms. Rizzi:

On behalf of the Sawmill Road Neighbors, we have reviewed the Initial Study and Notice of Intent to Adopt a Mitigated Negative Declaration ("MND") prepared in connection with the proposed Under Canvas Glamping Project ("Project") in Tuolumne County. We submit this letter to express our legal opinion that: (1) the MND for the proposed Project fails to comply with the requirements of the California Environmental Quality Act ("CEQA"), Public Resources Code § 21000 *et seq.*, and the CEQA Guidelines, California Code of Regulations, title 14, § 15000 *et seq.* ("Guidelines"), and (2) the County must prepare an environmental impact report ("EIR") before proceeding with the Project. I request that this letter be included in the administrative record for this Project and that it be submitted to the Planning Commission prior to its May 15 hearing.

The MND fails to include the information and analysis necessary to evaluate the Project's impacts, and it does not provide sufficient evidence or analysis to support its conclusions concerning many environmental impacts. Similarly, many of the mitigation measures proposed in the MND are inadequate and will not address the Project's significant environmental impacts. The Project will also have significant cumulative environmental impacts—in particular, those that will combine with effects from the Terra Vi project for which the County recently issued a Notice of Intent to Prepare an Environmental Impact Report. Cumulative impacts from these two projects include water supply and water quality impacts, fire impacts both to users of the projects and through increased likelihood of fire, air quality impacts, and traffic.

Moreover, we are concerned that the limited notice provided by the County failed to provide adequate notice to affected members of the local community. Many nearby neighbors did not receive notice of the Project, even though County staff was aware of their interest in the Project and its potential cumulative impacts with the Terra Vi project. Therefore, we request that the County notify all residents and affected businesses in the community of the Project and that it prepare an EIR before approving the Project.

I. CEQA Legal Standard

It is well settled that CEQA establishes a "low threshold" for initial preparation of an environmental impact report ("EIR"), especially in the face of conflicting assertions concerning the possible effects of a proposed project. *Pocket Protectors v. City of Sacramento*, 124 Cal. App. 4th 903, 928 (2005).

CEQA provides that a lead agency may issue a negative declaration and avoid preparing an EIR only if "[t]here is *no* substantial evidence, in light of the whole record before the lead agency, that the Project may have a significant effect on the environment." Pub. Res. Code § 21080(c)(1) (emphasis added). A lead agency may adopt a mitigated negative declaration only when all potentially significant impacts of a project will be avoided or reduced to insignificance. Pub. Res. Code § 21080(c)(2); Guidelines § 15070(b). A mitigated negative declaration will also be set aside if the proponent's conclusions are not based on substantial evidence in the record. *Sundstrom v. County of Mendocino*, 202 Cal. App. 3d 296, 311 (1988).

An initial study must provide the factual basis, with analysis included, for making the determination that no significant impact will result from the project. Guidelines § 15063(d)(3). In making this determination, the agency must consider the direct and indirect impacts of the project as a whole, Guidelines § 15064(d), as well as the project's cumulative impacts. *See City of Antioch v. City Council of Pittsburg*, 187 Cal. App. 3d 1325, 1333 (1986).

An agency must prepare an EIR whenever it is presented with a "fair argument" that a project may have a significant effect on the environment, even if there is also substantial evidence to indicate that the impact is not significant. *No Oil, Inc. v. City of Los Angeles*, 13 Cal. 3d 68, 75 (1974); *Friends of B St. v. City of Hayward*, 106 Cal. App. 3d 988, 1002 (1980); Guidelines § 15064(f)(1). Where there are conflicting opinions regarding the significance of an impact, the agency must treat the impact as significant and prepare an EIR. *Stanislaus Audubon Soc'y v. County of Stanislaus*, 33 Cal. App. 4th 144, 150-51 (1995) (an EIR is required if a project will result in reasonably

foreseeable indirect physical changes that may have a significant adverse effect on the environment); Guidelines § 15064(f)(1).

II. The County Must Prepare an EIR That Analyzes the Potentially Significant Effects of the Proposed Project.

An agency must prepare an EIR for a proposed project whenever substantial evidence in the administrative record supports a "fair argument" that the project may have significant impacts on the environment. Guidelines §§ 15064(a)(1), (f)(1). A fair argument can be made that the Project, which will replace open space with a subdivision, will have potentially significant impacts on biological resources, fire, and water supply. Furthermore, the Project will add to cumulatively significant environmental impacts resulting from a number of past, present, and future projects in the region. For all of these reasons, as discussed below, the County is required to prepare an EIR.

A. The MND Fails to Adequately Analyze or Mitigate Potential Impacts to Groundwater,

The MND fails to demonstrate that adequate water supply exists to serve the needs of the project. Although the MND asserts that water for the Project will be supplied by a well on the project site, nothing has been done to determine whether adequate supplies exist to supply water for the Project. As a result, the MND fails to adequately address the environmental setting for the Project with respect to water supply, and it fails to evaluate potentially significant impacts from groundwater use for the Project. It is not enough to say that if sufficient groundwater is not available to serve the Project, the County will modify the Project description to allow for hauling of water to the Project site. As currently designed, the Project will rely on a well for water. The County has an obligation to determine the impacts of supplying groundwater from that well, including whether the well will adversely impact wetlands on the Project site and whether it will adversely impact neighboring properties. This issue cannot be deferred to future analysis and mitigation, as currently proposed. *Sundstrom v. County of Mendocino* 202 Cal. App. 3d 296 (1988) (County improperly deferred analysis of water supply impacts for new hotel project.)

B. The Project Will Result in Significant Adverse Impacts to Biological Resources.

The California Department of Fish and Wildlife submitted comments on the MND that are highly critical of its failure to adequately analyze and mitigate impacts to biological resources on site. Although the County has proposed some modifications of mitigation measures, the fundamental problem remains that—despite the

acknowledgement that numerous special status species could occur on the project site—the County has deferred its analysis of potentially significant impacts to these species. Simply surveying before construction is not enough where the Project has already been designed. Without information regarding the location and extent of sensitive species on site, it is not enough to say that these species will be avoided when the MND does not even disclose if the site design would interfere with existing species, and if it does, whether the plan could be modified without causing other environmental impacts.

C. The MND Fails To Adequately Analyze Wildfire Impacts.

The Project will expose new resort visitors and existing residents to increased and significant wildfire hazards that must be addressed in an EIR. The project site is located in a Very High Fire Hazard Severity Zone. The area has burned in the past and likely will burn again in the future. Yet, the MND contains only a conclusory discussion of wildfire impacts and assumes that any potential issues can be addressed simply by two mitigation measures—one related to construction equipment and the other requiring development of a fire protection and evacuation plan. There is no evidence to support the conclusion that these vague and ill-defined measures will be effective.

First, the County needs to grapple more directly with the introduction of people, as well as fire pits and stoves into this extremely fire prone area. The MND contains no analysis of how the increased numbers of visitors and staff at the project site would (a) increase the chance of starting a wildfire or (b) increase the hazards for the existing population attempting to evacuate on local roads. Nor is there any discussion of increased fire risk from the Project, combined with the increased risk from the Terra Vi project. Recent experience with California wildfires has shown that the only effective way to reduce wildfire risks is to **not** permit new development in wildfire prone areas. See attached articles.

Finally, the County's consultant incorrectly states that CEQA does not require an analysis of the impact of fire hazard on users and employees of the Project. *See* Master Response 3. Where a project will exacerbate existing hazards, CEQA does require an analysis of those increased hazards on users of the Project. *California Building Industry Ass'n. v. Bay Area Air Quality Management District,* 62 Cal. 4th 369 (2015); CEQA Guidelines 15126.2(a). That the County would dismiss the need to evaluate these impacts at all is a telling indication of its failure to address this serious impact.

D. There is a Fair Argument that the Project Will Have Significant Cumulative Impacts.

CEQA requires a discussion of the environmental impacts, both direct and indirect, of the proposed project in combination with all "closely related past, present and reasonably foreseeable probable future projects." Guidelines § 15355(b); *see also* Pub. Res. Code § 21083(b); Guidelines §§ 15021(a)(2), 15130(a), 15358. The discussion of cumulative impacts must "reflect the severity of the impacts and the likelihood of their occurrence" (Guidelines § 15130(b)), and must document its analysis with references to specific scientific and empirical evidence. *Mountain Lion Coalition v, California Fish & Game Comm'n*, 214 Cal. App. 3d 1043, 1047, 1052 (1989). A lead agency must prepare an EIR if a project's possible impacts, though "individually limited," may be "cumulatively considerable." Pub. Res. Code § 15064(i).

Extensive case authority highlights the importance of a thorough cumulative impacts analysis. In *San Bernardino Valley Audubon Society v. Metropolitan Water District*, 71 Cal. App. 4th 382, 399 (1999), for example, the court invalidated a negative declaration and required preparation of an EIR for the adoption of a habitat conservation plan and natural community conservation plan. The court specifically held that the negative declaration's "summary discussion of cumulative impacts is inadequate," and that "it is at least potentially possible that there will be incremental impacts . . . that will have a cumulative effect." *Id.*

The MND fails to analyze the Project's cumulative impacts in light of related past, present, and reasonably foreseeable probable future projects. In particular, the MND contains no meaningful analysis of the impacts of the Project in connection with the Terra Vi project—a 140 unit hotel and resort project—located just across the street. For example, the MND simply assumes that the Project will not have cumulative biological impacts because its individual impacts will be confined to the project site. This conclusion fails to take into account cumulative impacts caused by increased development and its interference with wildlife movement and habitat. The development of both projects could reduce available habitat, increase human-wildlife interactions, and noise in the project area. Even if the Project's individual impacts were not significant—a conclusion that is not supported by the evidence—the combined impacts of both projects and their substantial intensification of human activity will be significant.

The MND also fails to analyze the cumulative water supply impacts from the present Project combined with increased water demand from the Terra Vi even though both projects will substantially increase water demand in the area. Finally, even though the traffic and air quality impact analyses may take into account existing traffic

and air pollution emissions, there is no evidence that the MND evaluated the increased traffic and air pollution resulting from both the Project and the Terra Vi project.

Because the MND does not analyze the potential for cumulative impacts in light of these past actions and future projects, it cannot possibly conclude that there will be no significant cumulative impacts. Accordingly, the County must prepare an EIR to evaluate whether the Project's impacts will be cumulatively significant.

III. Conclusion

For all of the reasons explained above, there is fair argument that the Project will have significant impacts on the environment and therefore the Project may not be approved on a mitigated negative declaration.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Ellison Folk

cc: Mary Beth Campbell, Sawmill Road Neighbors

1118750.1

Wildfire Fatalities Spark Fears About Recent Land Use Decisions In San Diego

Tuesday, November 20, 2018

By Alison St John

Photo by Alison St John

Above: The housing development Harmony Grove is nestled at the base of hills near Escondido, Nov 14, 2018.

The death toll in the California wildfires this year has fanned the flame of fears about new housing developments being approved in San Diego's unincorporated areas.

San Diego needs more housing, which is why the County Board of Supervisors planned to approve 10,000 new homes this year, in developments on the outskirts of town.

Out in the hills west of Escondido lies Harmony Grove, one of the places where the board recently approved hundreds of new homes.

Standing on a rocky outcrop overlooking the valley, Rick Halsey of the Chaparral Institute said this is where the Cocos fire burned four years ago.

"If you look at the bowl-shaped area behind me, it's a perfect fire trap," Halsey said. "And the development they want to put in here has one exit, which is right over there."

Halsey pointed north to where the new development of Harmony Grove Village is being built.

Many of the semi-rural developments the county has recently approved potentially put thousands of people in danger, Halsey said, because there simply would not be time to evacuate with the new, faster burning wildfires.

The Center for Biological Diversity sent a letter to the Board of Supervisors last week, with an analysis of the developments' cumulative impact on wildfire risk.

"Together, the developments would put more than 40,000 potential residents at risk," the analysis concluded.

"You cannot put thousands of people on the roads and expect them to survive, and that's what happened in Paradise," Halsey said. "They had a plan where they were going to have groups of people evacuating. You can't do that. It happens in a matter of moments — so you've got gridlock on the roads where people are basically dying in their cars because of the heat."

Evacuation planning

Evacuations in San Diego County are coordinated between the Sheriff's Department and Cal Fire. Standing beside his firetruck, Cal Fire's Jon Heggie pulled maps out of a satchel and spread one out on the tailgate.

"If an evacuation was to occur," he explained, "we have a set of maps that we pull out here for specific communities, and we go ahead and use these magnets to set them up. Then we work with law enforcement to identify areas that would be either an evacuation order or an evacuation warning. What we would do is then give that info to the county, and they'd put that out on the alert system of the Reverse 9-1-1 system."

"It's a well-orchestrated dance, so to speak," he said, "between us and our law enforcement partners to be able to do these evacuations in a timely manner."

Jim McKim has lived in Harmony Grove for 33 years, and he's skeptical. Standing on a two-lane road near his home, he waved toward Harmony Grove Road that leads through the hills to San Elijo.

"Just yesterday, we saw, from a power outage in the San Elijo area, traffic was backed up for about two miles just because the stop lights weren't working," he said.

McKim has been forced to evacuate his home three times because of wildfires, the last time for the Cocos fire in 2014.

"I was standing on our road watching the fire cross the hill," McKim said. "The weather changed, the wind died down, the onshore breeze came up, and the fire went from that hillside, burned out the Harmony Grove Spiritualist Association and swept over into here in a matter of minutes — and there's no way they can notify or plan for that."

Photo credit: Jim McKim

Smoke and flames creep down a hillside behind Harmony Grove, in May 2014.

McKim has a photograph of the flames and smoke descending the hill toward the empty housing pads where hundreds of new houses now stand, a development built since the Cocos fire. Supervisors recently approved 700 more homes nearby.

Cal Fire's Heggie said officials do have good evacuation plans in place.

"But," he said, "with the intensity and the speed with which these fires are burning, we have to have more than one plan, and some of those plans may be shelter-in-place. It's not our first choice, our first choice would get people to a safe place, but maybe that will be a second choice if our first option is closed."

Plan B: Shelter-in-place

Sheltering in place is an option that needs significant planning and training, said Halsey. There are communities that are better prepared for it that than others. He took us to a development called Eureka Springs, a community built in the last decade in north Escondido.

Halsey pointed to the chaparral-covered hills surrounding the homes but said the development has key features that could protect from wildfire. For example, all the homes have ember resistant vents on the roof.

"People have this notion of this wall of flame coming and hammering these homes and they're exploding, but 99 percent of the homes don't ignite that way," Halsey said. "What happens is little embers get into the attic and they basically burn from the inside out."

Halsey said if developers installed external sprinklers for the houses, and sacrificed a few homes to create empty space within a community, it might be viable to shelter in place. He walked through the play area in the middle of a large grassy open space at the center of Eureka Springs.

“Importantly, you’ve got this park right in the middle of the development,” he said. “This is where they should come, this would be a great place to come for safety.”

But sheltering in place is a terrifying option considering the intensity of the wildfires happening now.

Heggie said when winds are blowing 50 or 60 miles an hour, firefighters stand little chance of controlling the blaze, and people need to take responsibility for their own safety.

“When the fires are burning rapidly, we don’t need people to wait for a message from the fire department or the sheriff or the county,” Heggie said. “If people feel they are in harm’s way, we want them to evacuate on their own.”

Land use decisions

Halsey said more could be done to make communities on the rural/urban interface safer, but too many decisions are being made for short-term gain at the cost of long-term risk.

“It’s bordering on criminal neglect to put people in risks like that when they don’t consider the future because that’s what planning is supposed to be about — looking forward and not backward,” Halsey said. “And here’s the problem, we’ve got this development paradigm based on the last 100 years. We just can’t do it anymore, because the climate has changed and it’s putting people at risk.”

This year the County's Board of Supervisors have approved thousands of homes in Newland Sierra in the hills north of San Marcos and in Otay Ranch to the south near the border. But the county recently postponed a decision on other developments, like Lilac Hills in North County, until next year.

“Here’s the bottom line,” said Halsey. “We’re in a different environmental climate now, we can’t keep thinking the way we used to think.”

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NORTHERN NEWS

American Planning Association
California Chapter
Northern
Making Great Communities Happen

A Publication of the Northern Section of the California Chapter of APA

October 2018

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Financial District skyline from SF MOMA

Photo: Naphtali H. Knox, FAICP

NORTHERN NEWS

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OCTOBER 2018

We came, we planned, we were wrong

Pete Parkinson, AICP

You are all too familiar with the headline by now: ***California Is Burning***.

Last fall, more than 6,000 homes were destroyed in Sonoma, Napa, and Mendocino counties (including my own home near Santa Rosa). Homes went up in flames in rural, suburban, and urban settings, including 3,000 homes lost *within the city limits* of Santa Rosa.

CalFire had designated some of those areas as *very-high* wildfire hazard; others (including my neighborhood) were considered "only" *moderate* wildfire hazard. Still other areas — like the suburban Coffey Park neighborhood in Santa Rosa where over 1,300 homes were lost — were not considered wildfire hazards at all.

This year has brought no relief. As I write (in mid-August), we've seen new wildfires sweep into the city of Redding and threaten Yosemite National Park. The Mendocino Complex, the largest wildfire in California history (eclipsing a record set only a few months ago in Ventura and Santa Barbara counties) continues to burn 45 miles north of Santa Rosa.

Wildfire hazards have been a consistent theme in my career as a planner and planning director in three northern California counties (Napa, Sonoma, and Santa Cruz). I have overseen the preparation of General Plan Safety Elements, Local Hazard Mitigation Plans, and regulatory codes that addressed the full range of hazard management strategies, including road access, water supply, defensible space, and structural design. The underlying theme of these efforts was a belief that wildfire risks can be managed to an acceptable level of public safety, if not eliminated altogether. In fact, I cannot recall any development project that was denied, or where the density was substantially reduced, because of known wildfire hazards.

Journey's End mobile home park, with the Hilton Santa Rosa burning in the background, 10/9/2017, 9:11 AM. My mother-in-law lived at Journey's End, and it had been our evacuation plan destination.

We need to rethink our approach to development in fire-prone areas and wildfire hazard mitigation.

The firestorm that swept into our Santa Rosa community last October has fundamentally changed my thinking about development in California's fire-prone landscapes. Now, 10 months post-catastrophe, let me offer a few lessons learned from one planner's perspective.

Since the state's "Fire-Safe" standards were adopted in the early 1990s, communities and developers have relied on standards focused on adequate water supply for fire-fighting, adequate road access (getting firefighters in and residents out), and structural protection measures like interior fire sprinklers and the "hardened" structures prescribed under the 2008 Wildland-Urban Interface (WUI) building standards. Even today, developers propose increasing residential density in fire-prone areas by relying on evacuation plans and

(*continues on page 16*)

SEE PAGE 2 FOR A LIST OF WHAT'S INSIDE THIS ISSUE

WHAT'S INSIDE

"How long are Californians commuting? On average, Californians have relatively modest commute times, although a significant number spend considerable time traveling to and from work. Close to half (45%) of Californians commute for less than half an hour round-trip on a typical workday. About one-quarter (26%) travel between 30 minutes and one hour, while 22% report travel times of between one and two hours round-trip. Few Californians (7%) report travel times in excess of two hours round-trip on a typical workday. Average commute length varies drastically by region. More than 63% of residents of the San Joaquin Valley [but only] 40% of those in the Bay Area have a round-trip commute that is under half an hour." *—PRRI 2018 California Workers Survey, http://bit.ly/2NBXUUD, page 36. The survey provides a portrait of the working lives of Californians, via a random probability survey of 3,318 California residents. The survey focuses on how experiences differ by region, race and ethnicity, gender, age, educational status, and other characteristics. Interviews were conducted online in both English and Spanish between May 18 and June 11, 2018.*

Director's note

Sharon Grewal, AICP

Autonomous Vehicles and the City

Northern Section is proud to support the second national Autonomous Vehicle Symposium hosted by the University of San Francisco. The daylong symposium will focus on the many ways that technology and innovation are reshaping our cities' transportation, economics, and environment. We'll hear from national leaders in business, policy, and academia on how cities will innovate in the new mobility future. Attendees will participate in policy workshops focused on design and management strategies that they can apply in their own work. The symposium takes place on October 15 from 8 a.m. to 6 p.m. at the University of San Francisco McLaren Conference Center. See **page 6** for more information and to register.

Also, APA National has just released PAS Report 592, "Planning for Autonomous Mobility," by Jeremy Crute, Timothy Chapin, Lindsay Stevens, AICP, and our very own **William (Billy) Riggs**, **PhD**, AICP, LEED AP. The 84-page report previews coming changes and advises planners on how to prepare for and manage the transitions needed to ensure that their communities reap the benefits — and avoid the pitfalls — of AV technology. The report is free to APA members and can be downloaded from the National APA website at **http://bit.ly/2NTdZp0**.

Northern Section winners of 2018 Chapter awards

We are excited to applaud and announce the nine 2018 California Chapter award winners from Northern Section. You can see the list and read quotes from the winners on **page 13**. As Section Director, I'm extremely proud of our awardees. Congratulates to all; I can't wait to celebrate your achievements at the 2018 California Chapter Conference in San Diego, October 7–10. We send you our best wishes for success with the National awards, which will be presented in San Francisco April 13–16.

And speaking of the 2018 Chapter Conference in San Diego

You can see the program-at-a-glance at **http://bit.ly/2PG24eG**. The San Diego Section and the Chapter's VP of Conferences, our own **Hanson Hom**, **AICP**, have been working tirelessly on the conference for the past three years. The opening reception will be held Sunday evening, October 7, aboard the historic USS Midway. Meet your old friends and make new ones while enjoying a grand party among vintage WWII aircraft. Todd Gloria — Assembly Member from the 78th District and current majority whip — will give the opening keynote. Dr. Mary Walshok, an associate vice chancellor at UCSD, will give the closing keynote. Come celebrate the 70th anniversary of the California Chapter and earn all the AICP CM credits you need. Register now at **http://bit.ly/2PIwvRG**.

Diversity in the planning profession

The American Planning Association is committed to providing opportunities for all to achieve excellence in planning by fostering diversity and inclusion in the organization and the planning profession. APA is committed to being responsive to changes in communities and the challenges being faced in achieving just, equitable, and inclusive communities. Of course, it helps to have diversity and empathy in our own firms and agencies. **Linda Dalton**, **FAICP**, and **Miguel Angel Vazquez**, **AICP**, discuss "California's leadership in diversifying the planning profession" on **page 5**.

New Board members

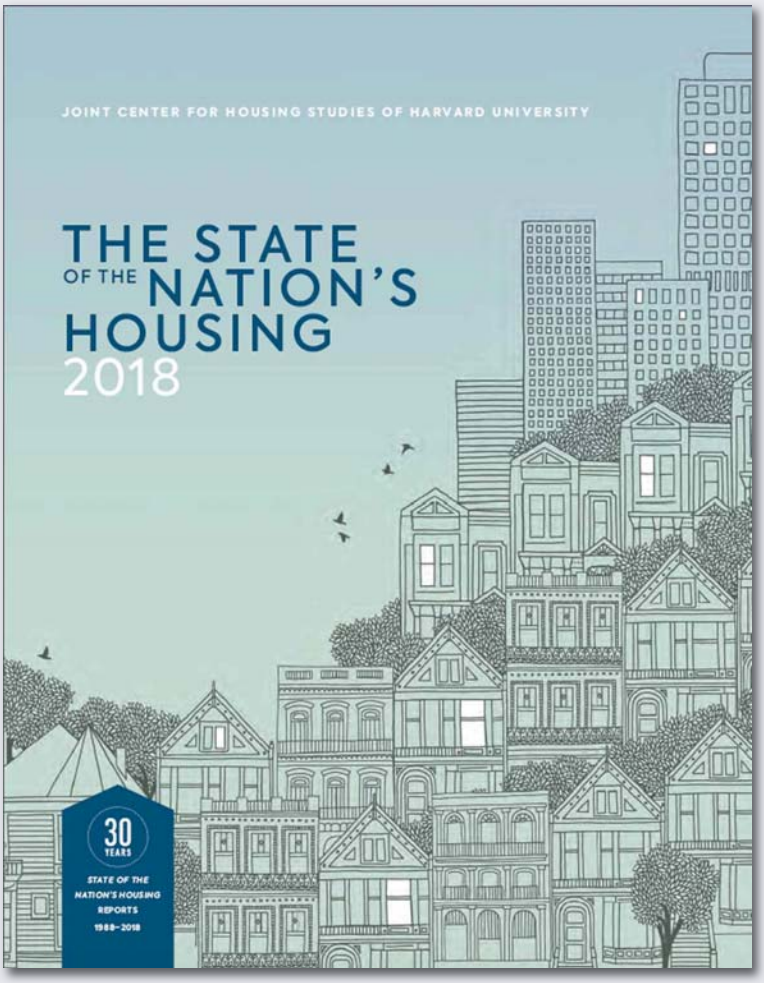
At our September 6th Board Meeting, Northern Section appointed **Libby Tyler**, **FAICP**, as Ethics Director, **Sunny Chao**, as Sustainability Director, **Shannon Hake**, **AICP**, in the new post of Distance Education Coordinator, and **Tom Holub** as Webmaster. We are privileged to have them share their professional experience in support of all we do for you and the planning profession in Northern California. You'll find photos and brief bios in "Who's where" on **page 11**.

If you're interested in getting involved in our activities and programs and helping your colleagues and the profession, or if you would just like more information regarding our committees and vacant board positions, please contact me at **director@norcalapa.org**. ■

'State of the Nation's Housing,' 2018

HUD USER, http://bit.ly/2MMLUiR

The Joint Center for Housing Studies of Harvard University (JCHS) recently released its annual "State of the Nation's Housing" report for 2018 (view or download at **http://bit.ly/2KT5Gau**). This year's report marks the 30th anniversary of the center's comprehensive research on trends in the U.S. housing market. To celebrate the report's release, JCHS held a panel discussion on June 19, 2018, at the National Press Club in Washington, DC, with housing experts and economists who reflected on the strides made since the release of the first report in 1988 and the challenges that remain. The panelists discussed current trends in the housing market, demographic shifts, and solutions to increase the affordable housing supply. (Video 1:30:12 at **http://bit.ly/2KTkeXJ**)



Current housing trends

Daniel McCue, senior research associate at JCHS, began the discussion with an overview of the rental market and homeownership trends presented in the report. *Median rental housing costs* have grown steadily for decades while median renter incomes have remained relatively stagnant. As a result, nearly half (47.5 percent) of the nation's renters are cost burdened, spending more than 30 percent of their income on housing. *Vacancy rates* in high-end rentals have increased, but vacancy rates for low-cost rentals have declined. Although rental demand and construction of multifamily units increased following the Great Recession, a shortage of low-cost units persists. Unlike multifamily rental housing, the construction of single-family housing has slowed because of a shortage of buildable land, rising construction costs, and shifts in demand and personal preferences.

According to the report, *baby boomers and millennials will drive housing demand and construction in the future*. Seniors aged 65 and older make up a large share of homeowners, and many prefer to age in place (**http://bit.ly/2KTR2j7**), which will reduce turnover in the housing market. As a result, more construction will be needed to increase housing inventory. In addition, seniors will need to modify their homes to better meet their needs as they age. Chris Herbert, managing director of JCHS, stated that housing experts should consider seniors' wishes to "age in community" close to familiar services, social networks, medical facilities, and neighborhood amenities.

Millennials are fueling an uptick in household growth, although at a slower rate than past generations at the same ages. Yet *homeownership rates among young adults aged 25 to 34 are lower than they were 30 years ago*, not only because of rising housing costs but also because higher education attendance rates have increased and marriage and childbirth rates have decreased. The 2017 homeownership rate for young adults has declined by 6.3 percent since 1987, with student loan debt hindering prospective buyers' chances of qualifying for mortgages and negatively impacting credit scores if they default. Young adults repaying student loans may also have difficulty saving for a downpayment and transitioning from renting to owning.

(continues on page 17)

Expanding California's leadership in diversifying the planning profession

Miguel A. Vazquez, AICP, and Linda C. Dalton, PhD., FAICP

For the past two years or so, the topic of diversity has taken center stage nationally at levels not seen since the civil rights movement. Its meaning and impacts on economic, political and social structures seem to be debated on a daily basis. Fueling such debate is our nation's tumultuous history bound by centuries of demographic shifts, territorial expansion, advances in technology, cultural diffusion, and policymaking.

It is not uncommon today to find tech giants like Apple and Google as well as everyday corporate brands like Starbucks, Target, and Johnson & Johnson dedicating time and resources to foster cultures of diversity and inclusion within the workplace and out into their service areas.

APA Diversity Vision Statement

The American Planning Association is committed to providing opportunities for all to achieve excellence in planning by fostering diversity and inclusion in the organization and the planning profession. The American Planning Association is committed to being responsive to changes in communities and the challenges being faced in achieving just, equitable and inclusive communities where the rights to life, liberty and the pursuit of happiness are achievable by all.

Similarly, for the first time in its history, the American Planning Association (APA) recently adopted a *Diversity and Inclusion Strategy* (**http://bit.ly/2N5zgP5**) which includes a detailed definition of what diversity means to APA:

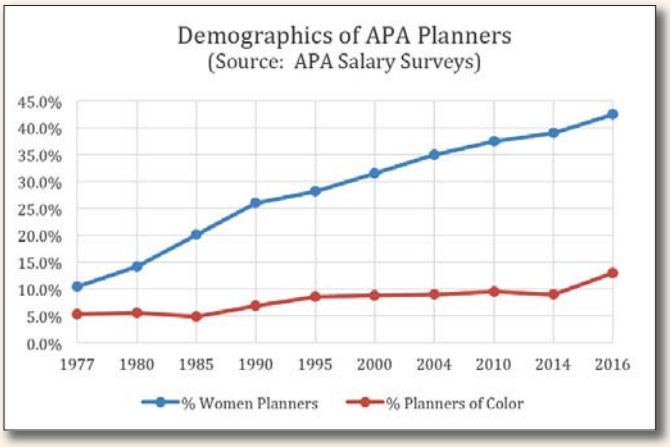
"Diversity is an inclusive concept which encompasses, but is not limited to, race, ethnicity, class, gender, age, sexuality, ability, educational attainment, spiritual beliefs, creed, culture, tribal affiliation, nationality, immigration status, political beliefs, and veteran status. With greater diversity, we can be more creative, effective, and just, and bring more varied perspectives, experiences, backgrounds, talents, and interests to the practice of planning and to the communities we serve. We recognize that achieving diversity and inclusion is an evolutionary process that requires an ongoing renewal of our commitment."

Reaching this milestone did not happen by accident. This achievement builds upon the advocacy of trail blazing planners from every corner of the nation, who for decades have expressed the need for our profession to focus on the issues affecting those feeling — and living — marginalized. While this article does not address every diversity trait suggested in the APA's definition, gender and race data provide a window into understanding diversity trends.

This article briefly explores some issues associated with diversity in the profession — including findings from Dr. Linda Dalton's research on the subject — with a particular focus on the role of California planners and their professional organizations (APA California, the California Planning Roundtable, and the California Planning Foundation) in moving forward the profession's efforts to address diversity, inclusion, and equity.

APA Diversity Snapshot

First, we need to acknowledge that nationally, APA has made significant progress in advancing women, but has lagged in expanding participation by African American, Asian American, Latinos, and other minority groups, as shown in the figure below.



Some of the patterns in the 40-year period can be explained by age and experience. In 2016 less than 30 percent of APA planners with 20 or more years of experience were women, and 7 percent were minorities. Planners entering the field recently are more diverse at 45 percent women and 15 percent minority.

(continues on page 18)

Autonomous Vehicles and the City

A Symposium Developing Policies and Plans for Livability

The University of San Francisco is hosting the second national autonomous vehicle symposium in San Francisco in collaboration with UC Davis, the Mineta Transportation Institute, Fehr & Peers, and Arup. The daylong symposium will focus on the many ways technology and innovation are reshaping transportation, economics, and the environment in our cities.

National leaders in business, policy, and academia will discuss how we can innovate cities in the new mobility future. Attendees will participate in policy workshops focused on design and management strategies that policy makers and planning practitioners can apply in their own work.

The symposium will be held Monday, October 15, from 8 a.m. – 6 p.m., at the University of San Francisco McLaren Conference Center, 2130 Fulton Street, San Francisco.

Waymo hybrid minivan undergoing testing in Los Altos, 2017.
Photo: Daniel Lawrence Lu, CC-BY-SA-4.0

For more information and to register, go to **http://bit.ly/2LESmqH**. AICP CM credits pending. ■

Where in the world

Photo: Aliza Knox *(Answer on page 12)*

Autonomous vehicles, pedestrians, and cities

John David Beutler, AICP

Autonomous vehicles (AVs) have a pretty good safety record already, and we can reasonably expect that they'll be more reliable than cars driven by humans. AVs will not become distracted, sleepy, bored, angry, or intoxicated. Their sensors will see in all directions and their reflexes will be fast. When they tailgate, it will be called platooning and it will save space on the road and energy.

So it was a jolt when an AV being tested in Arizona struck a pedestrian this year. We could rationalize it as an indication of immature or flawed technology or manufacturing, like a bolt that snaps and brings down a bridge. But that was not entirely the case. Maybe more surprising than the crash was that the car saw the woman before it killed her.

Pedestrians have close encounters with vehicles all the time. How will that change as AVs become more common? Photo by author.

The AVs are coming

Members of the planning and urban design profession are thinking about the many potential effects of autonomous vehicles on our cities — positive and negative, large and small. AVs might induce sprawl, reduce the need for parking, exacerbate air pollution, create congestion, reduce transit usage, and impact equity.

That said, amidst an iPhone-like technological optimism and while occupied with the other continuing demands on our professional attention, we are largely letting the technology firms and car companies drive us toward the looming AV future. For most of us, AVs will be the first physical robots with which we interact, and we really don't know what to expect. It's common to imagine being inside an AV, watching movies, catching up on our reading, eating, or sleeping. Very little is being suggested about what it will be like walking or cycling, facing an AV at the crosswalk. As it's coming toward you, is the AV seeing you (think Arizona)? What calculations are being made in its electronic brain?

Why did the AV hit a person it saw?

Imagine the process of a computer driving a car as being similar to a smart phone's autocorrect function rather than to a calculator solving an equation. The AV is reacting to conditions on the fly and with imperfect information. To prevent the car from stopping at every drifting shopping bag, it is programmed to ignore objects that have a lower probability of being human — which leads us to Arizona (**https://bit.ly/2wn3175**). As the technology improves, misidentification will happen less frequently, but there will always be uncertainty. And safety will never be the only concern for AVs, any more than it is for human drivers, who may speed in a school zone because they're late for a meeting. Will there be something to stop a ride-hailing company from dialing down the safety to trim a few seconds from each ride if it can save money and raise the share price?

Is there a correct response to AVs?

In my work, we are considering the design issues posed by AVs at the neighborhood, city, and regional scale (Chicago example, **https://bit.ly/2oa0FkW**). But no matter how the city is designed, if AVs operate carelessly, aggressively, or unpredictably, they will diminish our public spaces: Pedestrians fought it out with cars and trucks on the streets of the early 1900s. By the late 1920s, with the invention and outlawing of jaywalking, the cars had won (**https://bit.ly/2FAuSkQ**).

Unsurprisingly, we're in the early rounds of a similar battle as technologists call for the control of pedestrians to meet the needs of AVs (**https://bloom.bg/2LGVAdl**; **https://bit.ly/2onaKeC**). This time we need to start with a set of rules — something that works for everyone and establishes how robot drivers must behave on our streets — if we are to protect both our sense of safety and our actual safety. Traffic laws may punish lawbreaking, as

(continues on next page)

we saw this year in San Francisco when an AV was ticketed for allegedly failing to respect a pedestrian's right of way (**https://bit.ly/2ws7X7m**). But we need something more foundational, more akin to Asimov's Laws of Robotics about the relationship of robots with humans (**http://bit.ly/2LewZMB**).

I suggest these five principles as a starting point:

1. An autonomous vehicle must conform its behavior to the safety, comfort, and expectations of people outside the vehicle.
2. Humans must be made aware when a vehicle is under autonomous control.
3. Before it may move at any speed, an autonomous vehicle must be a minimum of five feet from any outside human.
4. An autonomous vehicle must signal its intentions to people outside the vehicle but must not command them in any way.
5. A non-occupant must be able to control an autonomous vehicle, at a minimum to cause it to stop.

(For background on this list, see my article in *The Urbanist* [Seattle], **https://bit.ly/2woMqMV.**)

Etiquette for robots

Whether or not you agree with these particular rules, we need standards for AVs beyond the laws that now apply to vehicular movement and traffic safety. If every AV manufacturer or operator has its own rules and its own expectations of pedestrian and bicycle behavior, we on the street will never know what to expect. We do not want a world where we need to know what brand of AV is approaching to know whether it's safe to cross the road.

Generally, the federal government regulates vehicle safety and the states register vehicles and license drivers. As both the vehicle and driver, the AV can fall through the cracks. The current federal administration has taken a hands-off stance. According to the U.S. Department of Transportation, "the Department's *preference* is for regulations that are non-prescriptive, performance-based, and seek to enhance safety *whenever possible*" (emphasis in the DOT original, **https://bit.ly/2oj9LvQ**). Is "whenever possible" good enough? Given the locations of many of the companies involved and much of the testing, it seems that the essential work will happen at the state and city levels, perhaps specifically in California and the Bay Area.

We will need city officials, traffic engineers, pedestrian and bicycling activists, health experts, psychologists, and equity advocates to assist in setting the rules. This is not because of the ethical concerns about tech companies acting in their own interests, but because they have different goals than do the many important groups in society, and those groups need to be at the table. We need a public conversation about the rules on our near-future streets, and we need an entity — one with the ability to make the rules — to convene that conversation.

Early efforts to form cooperative relationships with AV companies have had mixed results (See CityLab, **https://bit.ly/2Fj3OGg**). Though there are efforts underway like the Autonomous Vehicles Perspective Paper by MTC and ABAG (**https://bit.ly/2LzoAU4**) that seek to address AV issues, the focus is too broad to address the fundamentals of behavior and safety. A fragmented local response could well lead to federal preemption that, in turn, may serve the corporations more than the most vulnerable users of our streets.

A future history

With AVs running in the streets, will the planners of 2070 regret our inaction? Will we be like the city builders and officials who enabled the proliferation of automobiles in the early 20th Century but failed to see how the auto would diminish our cities, our environment, our health, and our public spaces? (See **http://bit.ly/2BzbuXo**.) Or will the denizens of 2070 congratulate us on our foresight?

Let's not wait for more tragedies like Arizona. Let's not wait to work out the terms of our relationship to AVs after they're ubiquitous. Let's find a way to come together and develop a structure for this important relationship among humans, streets, and AVs.

***John David Beutler**, **AICP**, has worked at the intersection of urbanism, land use, and transportation for the last 18 years. He is a senior urban designer at SOM in San Francisco, having joined the firm in 2015. Beutler holds a master's degree in city planning from UC Berkeley and a B.S. in entrepreneurial management from Missouri State University. You can reach him at **johnbeutler@hotmail.com**.*

Call for papers: A Healthy City for All

56th International Making Cities Livable Conference, Portland, OR, June 17–21, 2019

Suzanne Lennard, Ph.D. (Arch.)

We rejoice that many cities now are becoming healthier — making great improvements in sociable, walkable, and bike-friendly streets, public transit, fine-grained mixed use, high density, human scale housing, and access to community places, nature, and healthy food. At this conference we anticipate presenting the best models around the world, both in presentations and in design competition.

These improvements are not reaching the population groups most in need. The poorest neighborhoods suffer the greatest health problems. Many cities face an unprecedented housing affordability crisis, gentrification, and increasing homelessness. We especially want to hear from you if you are introducing innovative strategies to improve poor neighborhoods, rein in housing commodification, and end homelessness.

Presentation of papers

Papers are invited from practitioners and scholars in planning, urban design, architecture, landscape architecture, and urban affairs on such topics as public health and planning in city government and education, access to nature, public places for social life, a healthy urban fabric for 10-minute neighborhoods, sustainable and equitable housing, combatting inequitable gentrification, strengthening ethnic and cultural diversity, transforming suburbs into walkable neighborhoods, and maintaining city identity, to name a few.

A full list of topics and a submittal form are available in the *Call for Papers* at **http://bit.ly/2OOC5BF**.

Design awards competition

The 2019 IMCL Design Competition jury will consider all submissions that speak to designing a healthy city for all. Projects that emphasize health, equity, community, and sustainability are actively sought, and will be given particular consideration. The review procedure will be conducted by blind peer review.

Projects may be in design or already constructed, but must be real projects commissioned with the intention to build. There are no restrictions as to where these projects may be located. For details see **http://bit.ly/2ONgbyB**.

The conference will be held at the Sentinel Hotel, 614 SW 11th Avenue, Portland. For information about the program, and to register, go to **http://bit.ly/2OJZMuB**. AICP CM available (40+).

Suzanne H. Crowhurst Lennard *is the co-founder and executive director of International Making Cities Livable Conferences, since 1985. She holds an M.Arch and a Ph.D. (Arch.) from UC Berkeley, and was a lecturer in the university's Department of Architecture, 1971–77.* ■

"Who you know? How Californians get jobs. More than half (54%) of Californians say that their personal connections, such as close friends, family members, or coworkers, did not help them get their current or most recent job, compared to 37% who say that their personal connections did help them. Young Californians (ages 18 – 29) are notably more likely than seniors (ages 65 and older) to have received help from their friends or family in securing their most recent job. Nearly four in ten (39% of) young Californians, compared to only about one-quarter (26%) of California seniors, say that their personal connections helped them get their current or most recent job."
—PRRI 2018 California Workers Survey, http://bit.ly/2NBXUUD, page 34. The survey provides a portrait of the working lives of Californians, via a random probability survey of 3,318 California residents. The survey focuses on how experiences differ by region, race and ethnicity, gender, age, educational status, and other characteristics. Interviews were conducted online in both English and Spanish between May 18 and June 11, 2018.

Planning news roundup

Excerpts linked to the original articles

A new Starbucks may be a proxy for gentrification

CNBC, September 4, 2018

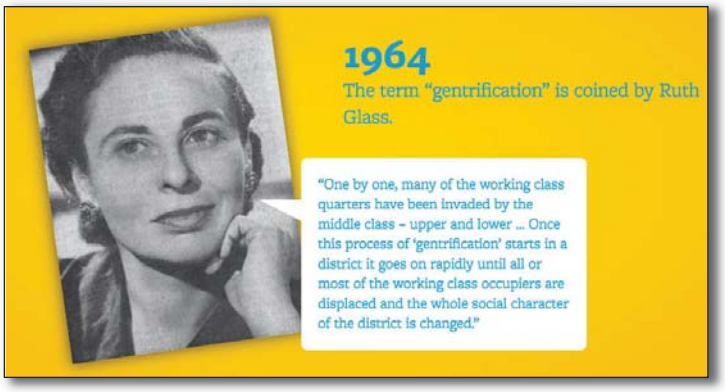
Thomas Franck, https://cnb.cx/2MUyx4k • "A new Harvard Business School paper used Yelp data to find that the entry of each Starbucks into a ZIP code is associated with a 0.5 percent increase in housing prices within a year.

"This data point is revealed in a broader study on gentrification by the Harvard Business School that relied on information from Yelp and the United States Census.

"It's not clear whether housing prices are rising due to the Starbucks opening itself or simply because more affluent customers that would go to the coffee chain have moved into the area.

"Harvard economics professor Edward Glaeser said Yelp data reveals it may be the latter. The study found that each 10-unit increase in the number of reviews is associated with a 1.4 percent increase in housing prices in the ZIP code.

"'The most natural hypothesis to us is that restaurants respond to exogenous changes in neighborhood composition, not that restaurant availability is driving neighborhood change,' the paper concludes.



Graphic from "Gentrification: A Timeline," Next City, http://bit.ly/2PC80p4

"'The presence of a Starbucks is far less important than whether the community has people who consume Starbucks,' Glaeser writes in the paper. 'Consequently, we think that this variable is likely to be a proxy for gentrification itself.'"

The benign neglect of California's forests is ending

Gov. Jerry Brown was involved in negotiations on SB 901 and is expected to sign it

Los Angeles Times, September 2, 2018

Editorial, https://lat.ms/2MWZZhu • "Decades of fire suppression have allowed forests to grow dense; management practices have led to more intense and destructive fires that are more dangerous to people living near the forests and more damaging to air quality.

"That's not all. Healthy forests are among nature's most powerful carbon sinks, absorbing carbon that would otherwise contribute to global warming. Cutting trees helps only if you cut the right ones.

"California lawmakers [have taken] an important and reasonable step toward reducing wildfire risk. The plan provides $1 billion from the state's cap-and-trade program over five years to thin the forests, cut brush, and set controlled burns.

"It also eases rules for cutting trees on private property ... to give private property owners more incentive to do preventive work and reduce the fire risk on their land.

"It's also a recognition that California has 15 million acres of forests in need of some kind of restoration. Even with $1 billion in new funding, the public sector can't cover the cost of all the work that is needed. The challenge will be ensuring that environmental and public safety interests, not commercial interests, drive the state's policies on forest management."

(The news roundup continues on page 21)

The display of calling cards from firms offering professional services appears in every issue of *Northern News*. Fees paid by the firms for this service help defray the costs of this newsletter.

Who's where

Amanda Eaken, director of transportation and climate for the Natural Resources Defense Council and director of transportation for the Bloomberg American Cities Climate Challenge, has been named to the San Francisco Municipal Transportation Agency Board of Directors. She holds a master of city planning from UC Berkeley and a bachelor's degree in ecology from Dartmouth College. At NRDC, she has led efforts to implement SB 375, California's Sustainable Communities and Climate Protection law.

Sunny Chao has been appointed to the Northern Section Board as Sustainability Director. As an associate planner with the City of Los Altos, Chao was project manager of their Climate Action Plan. She holds a B.A. in urban studies from UC Berkeley. Chao studied sustainable urbanism in Asia and organized a public exhibition, Ecotopia Asia, at the National University of Singapore.

Shannon Hake, **AICP**, has been named as Northern Section's Distance Education Coordinator, a new position. She lives in Oakland and works at WSP as the project manager for the Bay Area Carpool Program. Hake served for six years on APA's National Capital Chapter Board of Directors, where she was also chapter president. She holds both a master's and a bachelor's degree in urban and environmental planning from the University of Virginia.

Tom Holub has been appointed Webmaster for Northern Section. He is the founder and principal of Totally Doable Consulting, a strategic and technology firm consulting to nonprofits and the public sector. From 2000 to 2013, Holub was the Director of Computing for the College of Letters & Science, Dean's Office, UC Berkeley. He holds a B.A. in urban studies from UC Berkeley and lives in Oakland. Holub blogs on social issues related to urban cycling at **https://bike-lab.org**.

(continues on next page)

Who's where *(continued from previous page)*

Ned Thomas, **AICP**, is now Planning Director, City of Milpitas. Previous positions include division manager, City of San Jose Environmental Planning team; community planning director, Windsor, California; and principal planner, Henderson, Nevada. Thomas holds a master's in urban planning and design from Harvard and a B.S. in geography from Brigham Young University.

Libby Tyler, **PhD**, **FAICP**, a resident of Albany, CA, has been appointed to the Northern Section Board as Ethics Director. She recently retired from the position of community development director/city planner for Urbana, Illinois. Tyler is very familiar with the AICP Code of Ethics, having prepared and presented ethics training sessions at three Illinois State Section meetings (2012–2014). She holds a PhD in regional planning from the University of Illinois at Urbana-Champaign, a master of landscape architecture in environmental planning from UC Berkeley, and a B.A. in environmental conservation from the University of Colorado, Boulder.

Courtney Wood, **AICP**, has joined Alta Planning + Design as Planning Associate in the Oakland office, focusing on Safe Routes to School programs and bicycle master plans. She brings more than 10 years of experience in long-range planning and community engagement, including four years at Michael Baker International in Oakland and four years at RBF in Irvine. Wood holds a B.S. in urban and regional planning from Cal Poly Pomona. ■

Answer to Where in the world (Page 6)

Darwin, Northern Territory, Australia, with the Convention Center at right seen against a third of the Darwin skyline. A city of about 146,000, Darwin is the smallest, most northerly of Australia's capital cities. In February 1942, warplanes of the same Japanese air fleet that had bombed Pearl Harbor, dropped a considerably larger number of bombs on Darwin. *Photo: Aliza Knox*

Northern Section's 2018 State Award winners announced

At 5 pm on Monday, Oct. 8, at the California Chapter conference in San Diego, APA California will recognize the best in planning around the state. The jury reviewed 61 submittals and is granting 28 awards. Of those 28, nine awards are being presented to projects, firms, or plans in the Northern Section of the chapter. Here are those award winners, along with a quote obtained by Northern News. Please cheer on the award winners at the conference!

AWARD OF EXCELLENCE

Academic Award

Newark Old Town Urban Design Concept Plan

City and Regional Planning, Cal Poly San Luis Obispo

"The student team was creative and inspired the community to think of what was possible. The city council funded a Specific Plan — a process now underway — to implement many of the concepts." —*Terrence Grindall, Assistant City Manager, City of Newark*

AWARD OF MERIT

Best Practices

SB 1000 Implementation Toolkit

California Environmental Justice Alliance (CEJA) and PlaceWorks

"Creating the toolkit challenged us to collect and synthesize an array of tools already available for socially equitable and environmentally just planning. We really enjoyed preparing this guide for planners and communities across California." —*Cliff Lau, Project Planner, PlaceWorks*

AWARD OF MERIT

Comprehensive Plan, Large Jurisdiction

Propel Vallejo General Plan 2040

City of Vallejo

"Propel Vallejo General Plan 2040 recognizes the city's eclectic, artsy, working class character. It reaches out and connects with the community in a way that gives them ownership of the vision." —*Afshan Hamid, Acting Planning Director, City of Vallejo*

AWARD OF EXCELLENCE

Comprehensive Plan, Large Jurisdiction

Belmont General Plan Update, Belmont Village Specific Plan, and Climate Action Plan

City of Belmont, Dyett & Bhatia

"Together, these plans highlight our responsibility to economic growth within our transit corridor. Their comprehensive, self-mitigating policies endeavor to improve sustainability and quality of life. We appreciate the recognition!" —*Carlos de Melo, Community Development Director, City of Belmont*

(continues on next page)

Northern Section's 2018 State Award winners announced *(continued from previous page)*

AWARD OF EXCELLENCE
Emerging Planning and Design Firm

SITELAB urban studio

"In these exciting and challenging times for cities, we are thrilled to be honored for the work we love to do: building places and opportunities for community from the ground up."
—Laura Crescimano, Co-founder and Principal, SITELAB urban studio

AWARD OF EXCELLENCE
Grassroots Initiative

Pop-Up Care Village

SITELAB Urban Studio, Lava Mae

"SITELAB's inclusive, collaborative, and thoughtfully guided process perfectly mirrored Lava Mae's commitment to rapid prototyping. It created a solid foundation to prove our model with the first iteration." *—Doniece Sandoval, Founder and CEO, Lava Mae*

AWARD OF EXCELLENCE
Transportation Planning

West Contra Costa High-Capacity Transit Study

West Contra Costa Transportation Advisory Committee

"We truly appreciate this recognition. We hope it raises the study's profile, so we can find funding to implement these transit improvements along one of the most congested corridors in the Bay Area."
—Leah Greenblat, WCCTAC Project Manager

AWARD OF EXCELLENCE
Hard-Won Victory

Palo Alto Comprehensive Plan

City of Palo Alto, PlaceWorks

"Palo Alto is thrilled to be recognized for this collaborative and thoughtful process, as well as for the incredible amount of hard work that went into the preparation and adoption of the city's new Comprehensive Plan." *—Elena Lee, Senior Planner and staff project manager, City of Palo Alto*

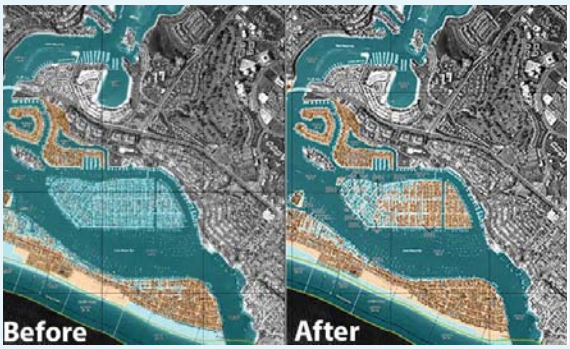
AWARD OF MERIT
Urban Design

Healdsburg Citywide Design Guidelines

Winter and Company, Boulder

"We're thrilled to be recognized for an aspirational and practical document that acknowledges the importance of design and community participation in maintaining Healdsburg's unique sense of place." *—Maya DeRosa, AICP, Planning and Building Director, Healdsburg.* ■

FEMA agrees to shrink Newport Beach coastal flood zone by more than half. Newport Beach has persuaded the Federal Emergency Management Agency to exclude about 2,700 properties in the coastal part of the city from updated flood maps. Owners in parts of the Balboa Peninsula, Balboa Island, and West Newport won't need flood insurance, saving up to about $3,700 each in premiums per year, the city estimates. City staff worked on the rollback for two years, showing FEMA that municipal infrastructure such as seawalls and sand berms on the beach protected more of the waterfront and adjacent neighborhoods than the federal agency's models predicted. The city this year added nine-inch concrete caps to Balboa Island's publicly maintained seawalls, which are about 80 to 90 years old, at a cost of about $1.8 million to get a few more years out of the barriers. A long-term plan shows the city building full new walls over several years starting in 2026. *—Hillary Davis, Los Angeles Times, https://lat.ms/2LfQy7p*



The first quieter megacity, thanks to electric vehicles. Because of how Shenzhen developed, with skyscrapers filling in the spaces between rural farm communities, about half the city's residents are urban villagers, who don't necessarily require their own cars. The new Shenzhen has a mix of electric buses, electric bikes and scooters, electric taxis, and even electric dump trucks. Although the city arrived late to urban noise, the shift to EVs that China has been pushing more than any other country has put Shenzhen at the leading edge of something unprecedented: the quieter city. *—Blake Schmidt, Bloomberg Businessweek, https://bloom.bg/2Pu1hgS*

Will the State's wildfire package suffice? "Questions remain about whether the bills [approved by the legislature at the end of August], if signed into law, will do enough to protect communities where more Californians live. 'There's too much focus on the rural areas, in my view,' said Michael Wara, a climate researcher at the Stanford Woods Institute, who also cited the challenge of local resistance to tree thinning. 'What needs to happen is a community-level change. That's the challenge.'" *—John Myers, The Los Angeles Times, https://lat.ms/2wEBZot*

"shelter in place" strategies to protect new residents. While these measures will no doubt provide some measure of increased safety, they are not enough, in my view, to offset the risks. Here are four specific points based on my experience in Sonoma County during the fires:

- **Evacuation plans are essential, but events rarely unfold according to plan**, especially during a wind-driven firestorm. Residents in some Santa Rosa neighborhoods spent nearly two hours in their vehicles, crawling along in traffic trying to get to safety — and this was in areas where the roads were built to full urban standards. In my rural neighborhood, with two-lane roads with shoulders, some had to make their way to safety by driving overland and through fences as flames, fallen trees, and downed power lines blocked the roads. Some had to abandon their cars and literally run for their lives. I have friends in north Santa Rosa who left their home before it caught fire, only to have their way blocked by a fallen tree. They called their kids to say goodbye but thankfully were saved *two hours later* by the heroic actions of two CHP officers. Simply put, *the speed, intensity, and expansive scope of the firestorm that hit Sonoma County last fall completely overwhelmed many evacuation routes*.
- **Sheltering in place is a last-resort strategy.** The WUI standards for new buildings increase the odds of a building surviving a wildfire, but relying on a hardened structure to protect whole communities in a known fire-prone area is the height of hubris and callousness. In Santa Rosa's Fountaingrove neighborhood, homes that were built to WUI standards appeared to fare no better than those built before those standards. This needs more investigation, but it is testimony to the power and intensity of the wind-driven fire, the likes of which we had not imagined. The lesson is that *we cannot engineer our way out of every hazard*. We also need to think about the psychological cost. I've spoken with people who sheltered in place and are grateful to have come through safely, but they suffered a traumatizing and terrifying experience. PTSD is now a community-wide issue in Sonoma County. Sheltering in place is a last resort, not a "plan."
- **Defensible space is critical to protecting communities in fire prone areas.** Every county and most cities have their own rules about vegetation management that, *if followed*, definitely reduce fire risk. But defensible space requirements are only effective if they are implemented and maintained over the long-term. Before the fires last fall, some property owners took this issue seriously while others easily slipped into an "out-of-sight-out-of-mind" complacency. Now, of course, the whole community is charged up about this issue and "defensible space" is a new buzzword. But if experience is any indicator, that enthusiasm will fade, and owners will become more interested in a nice-looking landscape than in protecting themselves against a hazard that is difficult to comprehend if you haven't lived through it.
- **Increasing density in rural, fire-prone areas increases the likelihood of a catastrophic fire** by adding fuel (buildings, landscaping, vehicles) to the natural landscape, and creates significant risks for residents in and near such developments. Hazard mitigation and "Fire-Safe" standards help, but they do not offset the risk and may only create an illusion of safety. **The fire hazards in some areas of our state are simply too great to allow additional residential development.**

We planned for the worst we could expect. It wasn't enough.

We plan for what we can envision. It turns out our vision was insufficient. Our understanding of fire-dependent ecosystems, historical fire behavior, and the experience of wildland fire experts informed our pre-fire planning efforts in the North Bay. As planners and as local government decision makers, we thought we had adequately anticipated the hazards and had planned accordingly. We were wrong.

As emergency responders (and like almost every public employee), we trained and exercised for scenarios we thought were "worst case." We were wrong about that too.

What happened in the North Bay fires last October exceeded everyone's vision and prudence, and we've seen similar catastrophes play out up and down the state since then. We have been given severe lessons on the risks of putting ever more people in harm's way. Those lessons need to work their way into our General Plans, zoning, and everyday planning practice — and soon.

Pete Parkinson**, **AICP**, is the president of APA California. He was Environmental Coordinator for Santa Cruz County from 1984–1996. From 1996 until he retired in 2013, Parkinson worked for Sonoma County's Permit and Resource Management Department and was its director for 11 years. He is currently consulting on projects for public agencies in Sonoma County. You can reach him at* **pete.parkinson54@gmail.com

Affordability challenges and solutions

Rising construction costs, land prices, and regulatory barriers (**http://bit.ly/2KV2Em3**) have made developing new affordable housing difficult. Former HUD Secretary Shaun Donovan stated that *the issue at the root of the affordable housing shortage is outdated zoning and land use regulations*. Americans are dealing not only with income inequality but also with geographic stratification, in which low-income and higher-income groups live in disparate areas of cities and suburbs. Donovan emphasized the role of state and local governments in overriding zoning codes and increasing transportation options to allow more minorities and low-income families to live and work in higher-opportunity areas. Herbert of JCHS said that one strategy states can adopt is to develop "as of right" districts to expand the supply of affordable housing. Reducing local zoning regulations to allow the construction of accessory dwelling units, increasing infill development, lowering permit costs, relaxing parking requirements, and instituting density bonuses for developers are other strategies that states can implement.

The low level of single-family housing construction and for-sale inventory coupled with the rise in home prices places homeownership out of reach for many Americans. The increase in home prices also raises downpayment and closing costs, which can be even harder to finance than monthly housing payments. The homeownership rate among African Americans lags behind that of other racial groups, and the black-white homeownership gap has widened by 29.2 percentage points. To bridge this gap, Donovan emphasized the need to focus on fair housing, housing finance, and the broader challenges of structural disadvantage and discrimination in the housing market.

Adding to the supply of affordable housing would help lower costs for renters, but for low-income families and individuals, subsidies are also critical for easing cost burdens and making housing more affordable. From 1987 to 2015, the number of very low-income renters increased by 6 million as the number of those assisted increased only to 950,000. George McCarthy, president and chief executive officer of the Lincoln Institute of Land Policy, spoke about the need to implement safeguards to reduce competition between the investment market — which profits by quickly renovating housing and raising rents beyond the financial means of existing residents — and the shelter market. With housing choice vouchers and low-income housing tax credits as the primary rental assistance programs in the shelter market, McCarthy suggested that policymakers identify ways to speed the development of affordable housing and *insulate the affordable housing stock from foreign investors* through public housing, community land trusts, and deed restrictions.

Ways forward

Eric Belsky, director of the Division of Consumer and Community Affairs at the Federal Reserve, noted the larger economic consequences of income stagnation amid high housing costs. Cost-burdened households have less money to spend on other goods and services and struggle to save for retirement or emergencies. Critical to avoiding a national housing crisis, Donovan emphasized, is rebalancing priorities and linking revenues directly to the scale of the problem. The supply of low-cost housing needs to keep pace with low-income residents' demand. Addressing structural and geographic disadvantages is critical to ensuring that low-income residents and minority groups can access neighborhoods of opportunity. Increased coalition building, streamlined regulatory codes, housing finance reforms, and other measures can help increase low-income families' access to affordable housing.

Ed. note: You can also view or download the "State of the Nation's Housing" report for 2018 (44 pages, 5.6 MB) from our Northern Section website at **http://bit.ly/2OKBh0s**. ■

AVs: Modeling disruptive trends. "It is important to understand how private sector market forces are changing travel decisions and behavior. … Without government action, the private sector business model for TNCs and MAAS generates revenue based on miles of travel, minutes of travel, demand levels, and choice of vehicle/service. Hence, the private sector is currently incentivized to increase the use of vehicles while the public sector [has] focused on reducing vehicle miles of travel (VMT) to improve sustainability. … As vehicles become more automated and connected, they offer greater potential to increase roadway capacity. The increase will come from shorter headways, less weaving, and more stable traffic flows. Roadway capacity will increase first on freeways and expressways, then on major arterials." *—Ronald T. Milam, AICP, and William (Billy) Riggs, AICP, Meeting of the Minds* **http://bit.ly/2wAE3Ok**

However, when we look at the academic 'pipeline' into the profession, there is a critical gap between the diversity of students in planning schools vs. their participation in APA.

About 30 percent of recent planning students are racial minorities whereas (as noted above) 15 percent of planners with less than 5 years of experience are racial or ethnic minorities (student data from the Planning Accreditation Board).

The patterns vary significantly across the U.S. In four states (Alaska, Hawaii, Idaho, and Montana) half or more of the planners were women in 2016; whereas in nine states less than one-third were women (Kansas, Mississippi, Missouri, Nebraska, Nevada, Rhode Island, South Dakota, Utah, and West Virginia). Generally, the southern and western regions employ more planners of color in comparison with New England, mid-Atlantic, and north central regions of the country.

A Note Regarding Data

APA, the Planning Accreditation Board, and other planning organizations could do a more thorough job of collecting data and following planning careers. To date, data is only available for traditional definitions of gender and for racial/ethnic background (often grouped as "white" or "non-white"), and not for other dimensions of diversity included in APA's broad definition.

Comparative data for trend analysis is very problematic. U.S. Census definitions continue to evolve , with the addition of multiple race options and with an increase in the number of respondents to surveys who decline to answer questions about race or ethnic heritage. Further, APA and PAB have handled counting Latinos differently, so their data are not directly comparable.

The discrepancies are sufficiently large to call for action while concurrently working toward more systematic and comparable data.

We also know from Dr. Dalton's research that women and minority planners were more likely to see their work as nontraditional than men/white planners. And planners who considered their work to be nontraditional were less likely to find APA relevant to their careers.

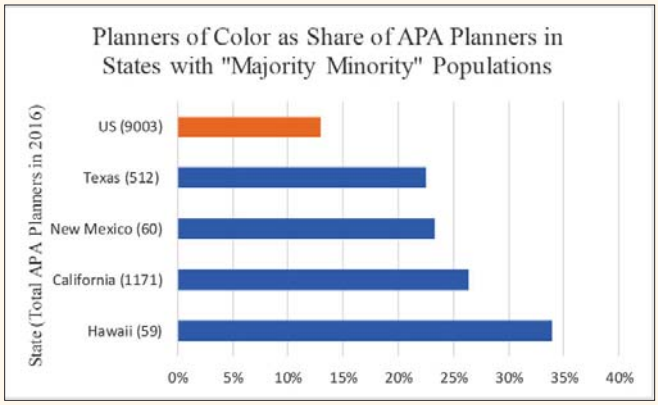
Further, the nature of professional practice for women and planners of color differs distinctly from white men even among those who belong to APA. For example, white planners were more likely to be involved in land use without community development, while the reverse was true for planners of color. White planners also engaged in environmental planning more often than planners of color.

In sum, we can't just expect the planning profession to become more diverse by "aging out" mature planners as they retire. What accounts for the success of women in planning — and is any of it applicable to planners of color? We need to know what happens to planning students of color after they leave the university — where they work, what their career paths are like, what professional organizations support them, and where they succeed (and where they do not). We need to consider how planning is portrayed and perceived outside the immediate profession, especially by professionals and leaders of historically underrepresented groups/communities.

California

At 45.6 percent, the involvement of women in planning in California is greater than the national average for APA members in 2016. Ten other states employ higher proportions of women, but the sheer number of women in planning in California exceeded their combined total in 2016.

California leads the nation in the ethnic diversity of the profession: APA California members represent 13 percent of all APA members, but 27 percent of racial and ethnic minority planners nationwide. While Hawaii employs a higher percentage of planners of color (at 34 percent), California has many more planners. The following figure shows the share of planners of color in states with "majority minority" populations.



Demographics certainly help explain this relative success, yet California out-performs other "majority minority" states except Hawaii. And Proposition 209 (1996) prohibits California's public institutions from affirmative action.

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Leadership on Diversity from California Planners

Aside from the demographic trends, the diversity transformation in the planning profession at the state and national levels has been fueled by the active engagement of various California planners. In many respects, such evolving engagement can be traced back to the devastating civil unrest in Watts in 1965. According to APA California Historian Steve Preston, communities of color formed organizations — the Watts Community Labor Action Committee, United Neighborhoods Organization, TELACU, Spanish-Speaking Unity Council, community design centers, and L. A.'s Barrio Planners to name a few — to represent their communities. Pioneers include Dr. Ed Blakely, Alvin James, Yukio Kawaratani, Dr. Leo Estrada, Frank Villalobos, and others.

Planners increasingly turned to questions of equity, although those early efforts often lacked the depth of understanding required to address racism and economic injustice. Only after the 1992 civil unrest in Los Angeles did a California chapter initiative lead National APA to launch its Agenda for America's Communities, and a tradition of diversity summits continuing today.

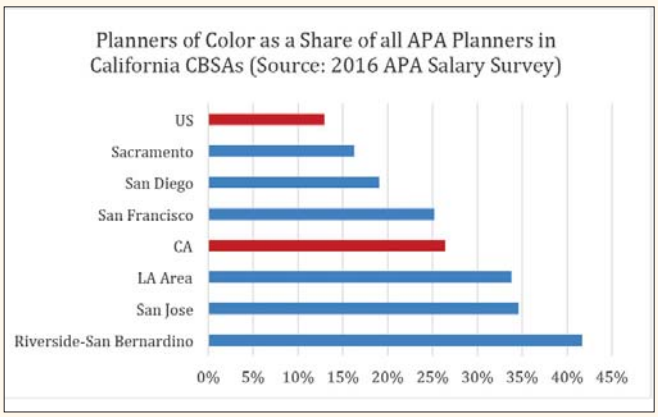
In terms of gender diversity, early planning pioneers from the 1940s and 1950s including Mary Robinson Gilkey, Gloria S. McGregor, Minnie Ruth, Marilyn M. Pray, and Betty Croly, FAICP, were instrumental in shaping APA California. APA California has elected seven women as president: Gloria McGregor, Janet Ruggiero, FAICP, Reba Wright-Quastler, AICP, Collette Morse, AICP, Jeri Ram, AICP, Brooke Peterson, AICP, and the incoming President Julia Lave Johnston. The work of Carol Barrett, FAICP, regarding planning ethics and women in planning, has also supported diversity in the profession. And APA in 2018 posthumously recognized Margarita McCoy, FAICP, as a Planning Pioneer, in part for her role as an instrumental mentor for many California planners.

More contemporary members who have carried the torch and have combined gender and racial equity as the propeller for diversity and inclusion at APA include planners such as Jeannette Dinwiddie-Moore, FAICP, and David Salazar, AICP (co-authors of APA's California Membership Inclusion Plan), Linda Tatum, FAICP, Hing Wong, AICP (first Asian-American elected as APA California President), James Rojas (Latino Urbanism Pioneer), Bill Anderson, FAICP (APA Past-President who among other things appointed California Planners to serve on the national APA Diversity Task Force), and Connie Malloy, Anna Vidal and Miroo Desai, AICP (who were instrumental in organizing the eight Chapter sections to form a Diversity and Inclusion Committee and in coordinating the annual Diversity Summit at the State conference). More recently, under the leadership of planner Miguel A. Vazquez, AICP, APA adopted its first diversity and inclusion strategy. The list of California planning leaders advancing an agenda of a more just and equitable planning practice continues to grow.

In short, our preliminary findings suggest that individual leadership, role models, mentors, and diversity sessions at state and section conferences and meetings have contributed to creating a more supportive culture for planners of color and women in California. Over several decades, their numbers have grown and sustained a movement that has landed in APA's court to examine and to take a stand and actions pertaining to diversity, inclusion, and equity in the planning profession and practice.

What more should California do?

Within California, there is significant variation by region (*i.e.*, Core Based Statistical Area, or CBSA) for both women and planners of color. In 2016 more than half of the APA planners in the Bay Area (San Francisco and San Jose CBSAs) were women, while the percentage was lower inland and in Southern California. The disparity for planners of color is greater, ranging from about 16 percent in the Sacramento CBSA to nearly 42 percent in Riverside-San Bernardino in 2016.



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Expanding California's leadership in diversifying the planning profession *(continued from previous page)*

Our preliminary study suggests that the success factors we listed above have been ad hoc or fragmented rather than systematic or institutionalized. Therefore, we recommend the following:

- Regular, visible coverage of all aspects of diversity in section newsletters and CalPlanner magazine, including profiles of prominent planners from all backgrounds;
- Regular sessions regarding diversity in planning during "prime time" at state conferences — with assured CM credit for attending and participating in such sessions;
- Encouragement of a diverse range of planners to assume leadership at the section and state levels;
- Recognition of leadership contributions to diversity in section and state awards programs, including scholarships for planning students;
- Formal mentoring for planners of color and planners from other minority groups, involving and connecting experienced planners with planning students and young professionals; and
- Tracking planning students from California's many planning programs and reporting their career progression.

The United States of America is a diverse nation unlike any other in the world. Geographers would explain that, over the course of history, North America has changed as a result of cultural diffusion, advancements in technology, and a European race for hegemony. Today, the ripple effects of that experience manifest in our daily work.

Facing inequities — unjust and unfair practices — is by far the most challenging aspect of the planning profession. Sometimes it is hard to talk about it, and sometimes easy to forget. Bringing these issues to the forefront is essential, as they are in many respects the root causes of many planning dilemmas.

Diversity in the planning profession is a portal into the conversation.

***Linda C. Dalton**, **PhD**, **FAICP**, is professor emerita of City and Regional Planning at California Polytechnic State University, San Luis Obispo, where she also served as chief planning officer. She is an emeritus member of the California Planning Roundtable and former board member of the California Planning Foundation. Her work has earned awards from the American Planning Association, Association of Collegiate Schools of Planning, and Planning Accreditation Board.*

***Miguel A. Vazquez**, **AICP**, currently serves as the American Planning Association's Diversity Committee Chair and as Healthy Communities Planner for the Riverside University Healthy System-Public Health. He is an active member of the California Planning Roundtable and received the 2018 APA President's Award to honor his work to advance diversity and inclusion initiatives.*

Sources:

APA: **https://www.planning.org/diversity**

APA/AICP Planners Salary Survey 2016: **http://bit.ly/2N42qya**

PAB Data Library: **http://bit.ly/2Nd9gBL**

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 (continued from page 10)

Lower East Bay housing moves forward

San Francisco Business Times, August 31, 2018

Fiona Kelliher, http://bit.ly/2Nao6J5 • "As renters flee San Francisco and Silicon Valley, East Bay cities from Concord to Fremont have positioned themselves as cheaper alternatives for Bay Area professionals.

"With Newark about three-quarters of the way to meeting a 2,500-unit goal on new waterfront development, Integral Communities and Trumark Homes have received approval for 331 units under the Bayside Newark plan. Formerly known as the Dumbarton Transit Oriented Development plan, the plan was approved in 2011.

"Union City has poured over $163 million of public money into revitalizing the neighborhood surrounding BART, with an additional $850 million from the private sector invested or planned to develop new housing. A public park and a promenade leading to a new eastern entrance to the BART station have been completed.

"Windflower Properties started leasing out Union Flats, a 243-unit apartment development next to BART. Rents range from $2,315 to $3,310 for one- or two-bedroom units. Windflower, which exclusively develops transit-oriented sites, has approvals for another 443 units directly adjacent to Union Flats. That project is pushing for a 2020 opening date.

"Other new developments nearby include MidPen Housing at Station Center (157 affordable units, the result of a public/private partnership with funding from the city, county, and state); AvalonBay Communities (438 units), and Essex Property Trust (282 units)."

Blocking development prices residents out of neighborhoods they want to preserve

CityLab, August 28, 2018

Joe Cortright, http://bit.ly/2BYejBD • "In city after city, we see … current residents … at city council or planning meetings objecting to new development ... 'so our neighborhood will stay the same.'

"Slowing or stopping new ... housing development has exactly the opposite ... effect. It constricts the housing supply, drives up rents, and fuels displacement.

"I profiled Oakland's Uptown and Fruitvale neighborhoods (http://bit.ly/2BT7mS6). Both experienced almost identical increases in rents and home values as the city boomed. Fruitvale, which has built more housing, has seen dramatically less demographic change. Uptown, which has built almost no new housing, has seen its population shift.

"If you don't build new housing, you intensify the shortage, raise rents, and amplify displacement. People associate new buildings with new residents, and assume that if new housing isn't built, new people won't show up, or they'll go somewhere else. That's not the case.

"A big reason some low-income neighborhoods are seeing development pressure is because wealthier urban neighborhoods and suburbs generally have been effective in deploying NIMBYist regulations that block development.

"In the game of musical chairs that is the urban housing market, the only way to make sure that all people find a place to sit — *i.e.*, not be displaced — is to add more chairs. Research on the subject, notably by California's Legislative Analyst Office — and confirmed by skeptical academics at UC Berkeley's Urban Displacement project (http://bit.ly/2BY2sTS) — is that building more market-rate housing reduces displacement."

(The news roundup continues on next page)

"Safe, affordable housing is necessary to improve health. CityHealth, an initiative of the de Beaumont Foundation and Kaiser Permanente, assesses the largest US cities on nine evidence-based policies that can create healthier communities that thrive. Recognizing housing as a determinant of health and overall quality of life, CityHealth spent more than a year considering a range of pragmatic policy options available to city leaders that could improve the quality, availability, and affordability of housing in urban settings. It found that no single policy is a cure-all for the highly variable housing challenges facing cities, but that inclusionary zoning is one tool that must be part of a larger and more comprehensive toolbox, ensuring safe, stable, and affordable housing. It is an important indicator of a city's commitment to producing affordable options alongside new development and growth. CityHealth identified four key criteria that should exist in a comprehensive inclusionary zoning policy: have an inclusionary zoning law in place, require program evaluation, apply to projects of at least 10 units, and mandate that at least 20 percent of the total number of units in a development are affordable." —*Shelley Hearne, Brian Castrucci, Loel Solomon, Health Affairs,* http://bit.ly/2BzVwMG

Chicago Architecture Center empowers young people to shape their city

WTTW Chicago, August 27, 2018

Daniel Hautenger, http://bit.ly/2LvSo41 • "Only 19 percent of registered architects in the United States are women. Three percent are Latino, and 2 percent are African American.

"The Chicago Architecture Center (http://www.architecture.org) aims to address that lack of representation and to empower the wider public to engage in the architectural and urban planning decisions that affect their lives.

"Using '*No Small Plans*' as a starting point (http://bit.ly/2LwiTXc), CAC runs community design workshops, and partners with teachers to integrate the graphic novel into curricula at schools throughout the city.

"For older kids with ambitions to enter architecture or urban planning, CAC offers a Teen Fellows program for women and young people of color (http://bit.ly/2BV9cCa) that starts during their sophomore year of high school.

"Sixteen Fellows begin to learn the fundamentals of architecture, meeting every other Saturday during the school year. Over summer, they begin with urban planning and community design. Their second year focuses on urban planning and paid summer internships. The Fellows program ends in the fall of the Fellows' senior year, when CAC helps them with their portfolios and applying to college.

"'The most important thing is to inspire the feeling that they belong in this set of fields that has been hard to enter if you're someone of color, if you're a woman. We're helping them along on a journey, and we're there for them,' says Gabrielle Lyon, CAC's Vice President of Education and Experiences."

Public transport should be free

We don't put coins in street lamps or pay by the minute in public parks.

Jacobin, August 24, 2018

Wojciech Kębłowski, • "The number of cities experimenting with fare-free public transport (FFPT) is on the rise.

"FFPT exists in 'full' form in at least 96 of the world's cities and towns for the vast majority of local public transport routes and services, for the vast majority of users, and for most of the time. In at least 138 other cities, fares are suspended either for specific areas, modes of transport, or periods of the day or year.

"Commerce, the Los Angeles suburb, reportedly first used full FFPT in 1962. Today, FFPT exists in 27 U.S. localities: small urban/rural areas (*e.g.*, Edmund, Oklahoma; Kootenai County, Idaho), university campuses (Chapel Hill, North Carolina; Macomb, Illinois) and natural parks and tourist resorts (Crested Butte and Estes Park, Colorado).

"A plethora of fare-free systems have emerged in Europe, particularly in Poland (21) and France (20). Many European municipalities justify FFPT as a strategy for reducing car use (*e.g.*, Avesta, Sweden; Bełchatów, Poland), car-related pollution and noise (Tórshavn, Faroe Islands), as a policy helping disadvantaged groups (Lubin, Poland; Colomiers and Compiègne, France), or to re-define collective transport as common good (Aubagne, France; Mława, Poland).

"Tallinn, Estonia, at 430,000 inhabitants, is the largest city to currently host a ticket-free program. Still, transport experts seem convinced that fare abolition is irrational, senseless, and irresponsible."

Hat tip to Direct Transfer. Read more at ***http://bit.ly/2PbfwXI.***

(The news roundup continues on next page)

Palo Alto needs help at the top. "Palo Alto's Chief Transportation Official Joshuah Mello has resigned, leaving the city with a vacancy in one of its most critical and challenging positions. Prior to coming to Palo Alto, he worked as a consultant at Alta Planning + Design. His departure adds to the growing list of vacancies at the highest level of City Hall. The positions of city planning director, public works director, and chief financial officer are now being filled on an interim basis. The city will also have a vacancy at the top of its utilities department when its general manager takes over as city manager in December."
—Gennady Sheyner, Palo Alto Weekly, *http://bit.ly/2wzFDQG*

Palo Alto City Hall from University Avenue

Healdsburg to limit downtown hotels, require affordable housing

The Press Democrat, August 23, 2018

Kevin Fixler, http://bit.ly/2LA3lkY • "Amid a growing public outcry over the proliferation of hotel rooms downtown, Healdsburg's city council has asked staff to draft an ordinance banning any more hotels in the town's central retail hub.

"In addition, the ordinance would require hotel developers to create one affordable housing unit for every five hotel rooms built, or pay a fee toward a fund aimed at creating such housing.

"The decision requires council endorsement at later public meetings.

"Healdsburg had 387 hotel rooms at the start of the year, including 142 downtown, according to the city. By year's end the total number is expected to balloon to 548 across the city — a 42 percent increase. Another 178 rooms are in the pipeline, ultimately bumping the city's total to 856 rooms in the coming years.

"[Our] 'small-town charm is a very delicate thing,' Councilwoman Leah Gold said. 'So why in our right minds are we talking about approving any hotels at all? We don't need any more hotels right now. It's time to be responsible and take a pause.'

"Mark Luzaich, owner with wife Marie of the small Duchamp Hotel downtown, asked what the new limits would mean for existing hotels like theirs, which had long-term plans of adding to its six guest rooms. The envisioned ordinance would prevent Duchamp's expansion."

Building housing on flood plains is another sign of growing inequality

The Conversation, Aug 21, 2018

Deborah de Lange, http://bit.ly/2BCFSQA • "Flood plains are easy to build on because they are flat and, in cities, they tend to be close to amenities. Yet ... irresponsible choices made by elites, at Waterfront Toronto for example, leave unsuspecting, lower-paid professionals in dangerous circumstances with rising insurance costs and potentially bad investments. That's because future flood insurance may become prohibitively expensive or insurers may decide not to cover high-risk properties.

"Research shows that densely populated areas are more vulnerable — the same disaster affects more people in dense environments.

"New York City is going to build a wall around the lower part of Manhattan and add a park. The Dutch are using public space to absorb floodwater. New Orleans is building parks to double as reservoirs for floodwaters, on the advice of the Dutch.

"Meanwhile, new Toronto lakefront condominium developments are proceeding on flood plains historically contaminated by heavy metals, oil, and coal. 'Workforce housing' is a required part of the plan. Middle-income professionals are expected to settle in the waterfront condominiums so that they can be closer to where they work.

"However, the waterfront area remains a flood plain and is affected by storm surges. We have also seen streetcars submerged in water recently with people trapped inside. What's left of Toronto's waterfront should be public parks, not condominiums billed as 'workforce housing.'"

(The news roundup continues on next page)

BART housing bill on governor's desk. Under AB 2923, "BART could develop tens of thousands of homes on property it owns near stations. The bill requires that BART replace any parking spaces eliminated with parking options elsewhere. The BART board has until July 2020 to formally adopt its guidelines. Affected cities would be required to bring their own zoning laws into compliance with BART standards or allow the agency's rules to govern development on its property. 17 Bay Area cities and the League of California Cities registered opposition to the bill." *—The California Report, KQED, http://bit.ly/2BUacGH*

What the Berlin Wall can teach us about urban development

Chicago Booth Review, August 21, 2018

http://bit.ly/2BCZ2Wx • "Economic activity isn't evenly distributed across geographical space. This is reflected in the existence of cities [and] the concentration of economic functions in specific locations within cities, such as Manhattan in New York and the Square Mile in London.

"When Berlin was divided at the end of the Second World War, the western part lost access to the heart of the city; when the wall came down in 1989, the city was reunified. The researchers tracked the fortunes of West Berlin, which remained a market economy during the 41-year period of division, collecting data on employment, population, and rents between the 1930s and the 2000s.

"They find that property prices and economic activity in the eastern side of West Berlin, close to the historic central business district in East Berlin, began to fall when the city was divided. Then, after reunification, the same area began to redevelop: West Berlin suddenly had access to all the knowledge and public resources in the resurgent central business district it had been denied. This spurred development in these areas, raising land prices close to the central business district and demonstrating the positive effect of exposure to density in neighboring areas.

"The model ... has practical applications for urban planners making decisions on infrastructure and housing. [It] also makes it possible to simulate what will happen to places that are close to proposed new infrastructure, what the potential economic spillovers to other locations may be, and ... when improving one area is likely to hurt another area."

Cooling the Concrete Jungle

CityLab, August 20, 2018

Linda Poon, http://bit.ly/2BFoyKQ • "Finding shade isn't always easy in Dallas, Texas. Though home to the 6,000-acre Great Trinity Forest, there's a dearth of trees in the rest of the city. And the urban heat island effect has made Dallas one of the fastest-warming cities in the United States.

"'If we continue to add impervious surfaces and remove trees, we could have an urban heat island that covers almost half the city,' said the director of operations and urban forestry at the Texas Trees Foundation.

"The Foundation [started] mapping Dallas's tree cover in 2015. Aerial imagery captured the overall canopy, and the team physically counted the species of trees in a sample of more than 600 plots. On average, Dallas has 29 percent canopy coverage. Some neighborhoods have less than 10 percent.

"[The] team's map combines heat, health, equity, flood zones, and pedestrian and biking safety data. They targeted areas that show high health disparities, public schools that have little to no shade, and places with high foot traffic and pedestrian deaths.

"The Texas Trees Foundation's report (81 pages, http://bit.ly/2BA6jXh) suggests that the city will need to increase its tree canopy by about 5 percent (roughly 300,000 trees) to make a dent in curbing the heat island effect.

"'Part of what we're doing,' said the Texas director of the Nature Conservancy, 'is generating the science to connect the dots between trees, vegetation, mental health and well-being, and things like asthma.'"

(The news roundup continues on next page)

"What I learned on the city council. There's no question that serving as a local elected official in California has gotten a lot harder over the past decade or two. And, mirroring what's happening at the national level, the ability to get things done locally has gotten much more difficult. Local politics is getting more ideological and the divisions in every city are getting starker. A disagreement on policy is one thing, but one [citizen] declared — in the subject line of his email — 'Give me plastic bags or give me death!' … But maybe the most important thing is simply to help people see political and civic life in their town as a shared effort that includes not just the elected officials but everybody else as well. That's where the hope lies: When ordinary people from various backgrounds are inspired to step out of their own world and into the wider world of civic involvement."
—Bill Fulton, Zocalo Public Square, http://bit.ly/2wyqEGA.

The jobs-housing hamster wheel

Shelter Force, August 20, 2018

Rick Rybeck, http://bit.ly/2BEHDgl • "Housing affordability appears to be a conundrum. Housing prices tend to be low in communities where job opportunities and/or compensation levels are low. But even relatively 'cheap' housing in these communities might not be affordable if household members are unemployed or earning low wages. Contrarily, where job opportunities are more robust in terms of number and compensation levels, housing prices tend to be very high, leaving many households struggling to afford decent housing if they have average or even above-average incomes.

"Many communities are stuck on a jobs-housing hamster wheel where increasing job opportunities and higher wages appear to be canceled out by a matched increase in housing prices and rents.

"It is not the price of lumber, bricks, or labor that accounts for high or low housing prices. The controlling factor most often is the price of land. If public goods and services are tied to particular locations and are well designed and well executed, these areas will rise in value.

"Many economists from widely divergent perspectives agree that returning publicly created land value to the public sector and recycling them for public purposes — known as land value return and recycling or LVRR — could have significant benefits. For example, LVRR encourages more compact development, which is more sustainable both environmentally and fiscally.

"LVRR is typically overlooked or underutilized as a revenue source. More robust utilization of LVRR could substitute for taxes on privately created building values. It could lead to more real estate development activity resulting in both increased employment and more affordable housing, thereby overcoming the jobs/housing conundrum." ■

"These California counties have the highest concentration of homes vulnerable to wildfire. Deadly wildfires, once again, have pushed the conversation about the risk of living in some parts of California to the forefront. A new analysis by insurance data provider Verisk Analytics shows that more people are in danger than you might think. More than 2 million homes — about 15 percent of all housing units in the state — have high to extreme risk of wildfire damage, according to the New Jersey-based firm. In seven counties, mostly in Northern California, more than two-thirds of all homes were in jeopardy. Verisk Analytics used three factors to determine risk, including how close a property is to forests, shrubs and trees; whether it is near hilly or mountainous terrain; and if it is hard to reach and isolated. In the case of the northern counties, the risk will be higher because homes are often dispersed at the edge of a wildland area, said Lenya Quinn-Davidson, a Eureka-based fire advisor for the University of California Division of Agriculture and Natural Resources. Quinn-Davidson said many homes actually burn not from the front of the fire but from embers landing on nearby shrubs or roofs filled with debris."
— Michael Finch II, Sacramento Bee
http://bit.ly/2BEnWoQ

County	DUs at High and Extreme Wildland Fire Risk	Percent DUs at High and Extreme WL Fire Risk
Los Angeles	444300	13
San Diego	254400	22
San Bernardino	111500	16
Ventura	77900	28
Alameda	77000	13
Riverside	76800	10
Orange	73800	7
Santa Clara	63200	10
El Dorado	53900	61
Santa Cruz	52400	50
Contra Costa	50100	13
Sonoma	47600	23
San Mateo	40500	15
Butte	40300	42
Nevada	39300	75
Monterey	38500	28
San Luis Obispo	38300	33
Placer	37200	24
Santa Barbara	37100	24
Marin	33700	30
Kern	33100	12
Humboldt	27300	44
Shasta	25100	32
Tuolumne	25100	80
Napa	24100	44
Mendocino	23800	59

California counties with more than 20,000 dwelling units at high and extreme wildland fire risk.
Source: https://verisk.com

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Climate Changed

California's Wildfire Epidemic Is Blamed on Bad Building Decisions

By Christopher Flavelle
November 14, 2018, 1:00 AM PST

- Experts say the state should strengthen already tough codes
- Fires spur misgivings: 'Why the heck did you all build there?'

California's deadly wildfires have a straightforward solution, experts say: stop building homes in places that are likely to burn -- and make homes that already exist in those areas a whole lot tougher.

That approach, wildfire and climate policy experts are quick to add, would be expensive and unpopular, especially in a state with both a housing shortage and stunning wooded landscapes that people want to live in. But as climate change causes more frequent and shocking blazes, they say anything less won't make enough of a difference.

Burned-out homes and vehicles stand during the Camp Fire in Paradise, California, on Nov. 13. *Photographer: David Paul Morris/Bloomberg*

“It’s a land-use issue,” said Alice Hill, a senior adviser for climate resilience to President Barack Obama. Without so many homes being constructed in vulnerable areas at the edge of the forest, “we would still have the fires. But we wouldn’t have this kind of devastation.”

A paradox of California’s wildfire epidemic is that it already has one of the most aggressive building codes in the nation. The state uses the most up-to-date version of model national codes, and doesn’t allow local governments to opt out of those codes. It also requires that homes in areas with the highest risk of wildfire get built with fire-resistant materials and construction techniques.

Why California Wildfires Put Heat on Power Companies: QuickTake

“I always use California as an example,” said Sara Yerkes, senior vice president of government relations for the International Code Council, the Washington-based nonprofit that releases updated model codes every three years. “The state really takes its responsibility seriously.”

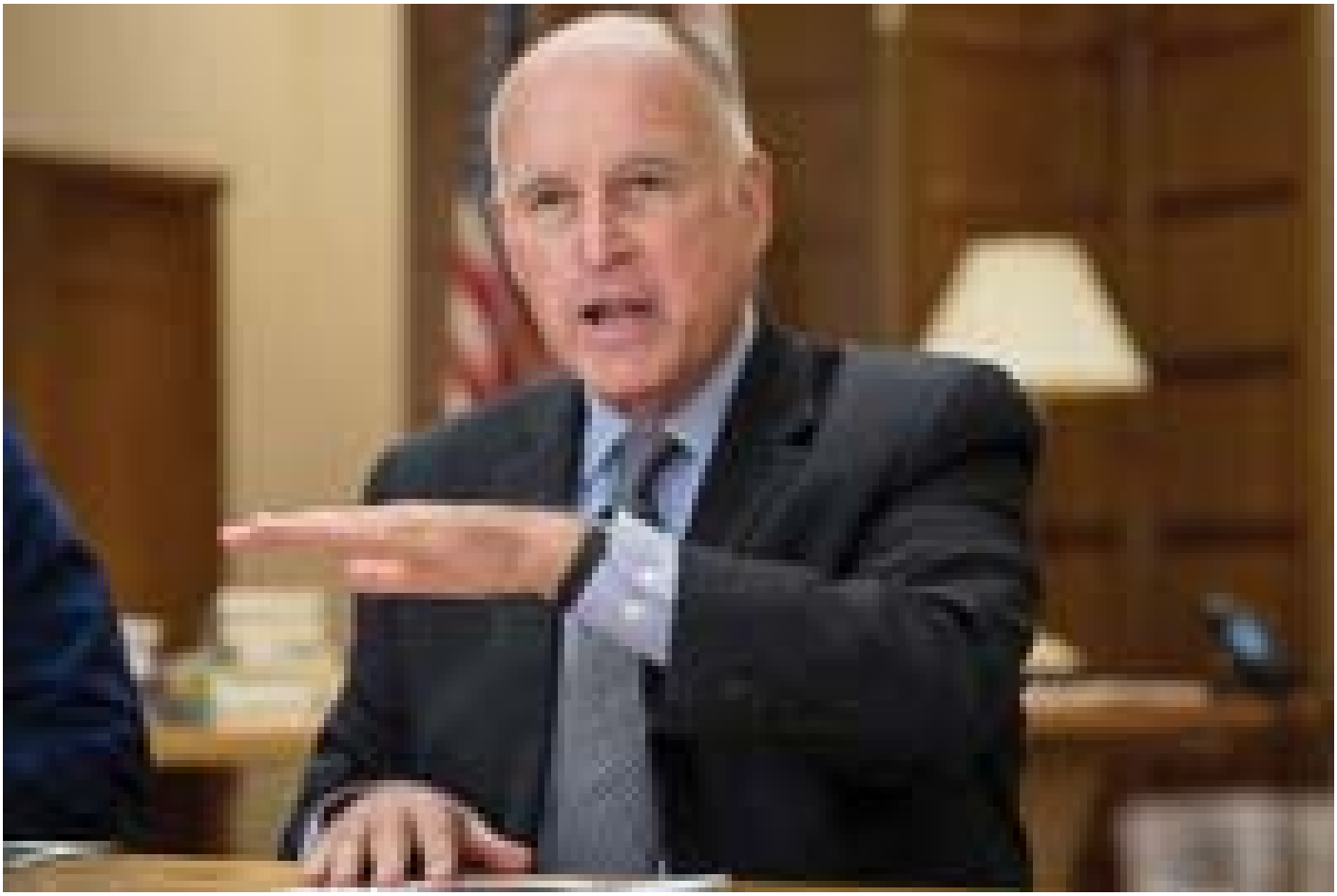
But Yerkes said building codes are meant to be a baseline, providing a set of minimum requirements that states can add to based on their specific environments. And she said they don't account for broader policy decisions, such as allowing subdivisions in places with high fire risks.

"There's more people now living in these areas," Yerkes said. "Maybe that's something that these local governments need to look at."

A spokeswoman for California Governor Jerry Brown, asked to respond to concerns that the state had failed to impose adequate restrictions on building in fire-prone areas, sent an excerpt from remarks Brown made during a press conference last December.

Building Standards

"Yes we need good building standards," Brown said, according to the excerpt. "But when you say more building standards, I always want to say let's do this very carefully because it is complex. That does raise costs. So we have to protect, but I want to do it in the wisest way possible."



Governor Jerry Brown *Photographer: David Paul Morris/Bloomberg*

In interviews, wildfire policy experts pointed to a range of specific reforms that could help reduce the danger facing people and homes in California. Each of those reforms shared one trait: They cost money.

One problem, according to Molly Mowery, founder and chief executive officer of Wildfire Planning International, is that state and local officials tend to define high-risk areas too narrowly. As a result, California's aggressive wildfire codes don't apply in neighborhoods that may appear safer on paper, but are increasingly affected as fires grow in size.

"More and more places around the country are getting affected in areas that were never labeled extreme," Mowery said. "We need to stop thinking in terms of limited areas."

Earlier: 'Like a War Zone': Malibu Wildfire Ravages Wealthy Enclave

Fire-resistant materials and building techniques can increase the cost of construction. But those costs don't have to be exorbitant, according to Stuart Tom, president of the municipal engineering and consulting firm JAS Pacific Inc. and a member of the International Code Council's board of directors. He said some jurisdictions are considering mandating that older homes use materials that meet the latest requirements when they're renovated.

"How do you get what are really really good standards to be integrated into communities of older, at-risk construction, in a fair and cost-effective manner?" Tom said. "If you are going to re-roof your building, well then perhaps the entire roof should be compliant" with the wildfire code.

Another option, and one that could produce even more pushback from residents, is to apply the latest building codes retroactively to all homes in vulnerable areas, whether they're renovating or not.

Hill, the former Obama adviser, said that when a wildfire strikes, those older homes are quicker to catch, becoming a threat to the buildings around them. She said the risk of fires has become so great that local officials have to consider requiring all homeowners in wildfire areas to meet updated standards.

Wooden Roof

"I think they should be examining it," said Hill, who is now a research fellow at the Hoover Institution. But she said the problem is cost. "To replace a wood shake roof is a very expensive matter."

There's a precedent for that step. In 2015, Los Angeles Mayor Eric Garcetti, backed by a unanimous city council, applied that city's earthquake-resistant seismic codes retroactively to the most vulnerable categories of buildings. Garcetti's office didn't respond to questions about whether he has considered a similar move for wildfire safety codes.

The Woolsy fire burns a home near Malibu Lake in Malibu on Nov. 9. *Photographer: Ringo H.W. Chiu/AP Photo*

A more draconian measure would be to make it harder for developers to build subdivisions in risky areas in the first place.

Michele Steinberg, wildfire division director for the National Fire Protection Association, said the increasingly deadly fires in California have prompted soul-searching among safety experts about how much can be accomplished by simply clearly flammable material from the area around a home.

Reaping Trouble

“It’s making a lot of us question, is it enough?” Steinberg said. “Why the heck did you all build there? This is just a bad land-use decision. Now you’re reaping the trouble.”

Still, Steinberg added that stopping people from building where they want to build can run counter to American values.

“Our country’s big value is owning your own land, owning your property,” Steinberg said. “Anything that appears to threaten that is really not met with happiness and open arms.”

It’s not just cultural values that prevent tighter land-use restrictions, but economic value as well, according to Hill.

“In Malibu, a hillside home will have a beautiful view of the ocean,” Hill said. “Those property lots are highly valuable. There’s lots of pressure on local officials to permit development. That increases your tax base, that contributes to the city’s coffers.”

The remains of a destroyed home stands along the Pacific Coast Highway in Malibu on Nov. 13. *Photographer: Patrick T. Fallon/Bloomberg*

If California won't stop building at the edge of the wilderness, it should at least apply the same strict standards of firefighting that cities adopted decades ago, according to Ray Rasker, executive director of Headwaters Economics, a consulting group in Montana that advises governments on wildfire risks. That means significant new spending on water infrastructure and municipal employees, as well as a willingness to enforce tougher rules.

"You would have fire hydrants. You would have full-time firefighters in your neighborhood. You would require sprinklers," Rasker said. "And you'd have a fire department inspect your building and your property once a year, with strict penalties if you don't comply."

The reason that many towns at the edge of the forest don't apply those standards is cost, he said. But as climate change gets worse, that calculus becomes more shortsighted.

"Human lives are invaluable," Rasker said. "Yeah, cost matters. But the cost of not doing the right thing is tragedy."

In this article

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JAS PACIFIC
Private Company

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

March 20, 2019

Natalie Rizzi, Planner
Tuolumne County Community Resources Agency
2 South Green Street
Sonora, California 95370
NRizzi@co.tuolumne.ca.us

Subject: Harden Flat, LLC Site Development Permit SDP18-002 (Project)
MITIGATED NEGATIVE DECLARATION (MND)
SCH No.: 2019029073

Dear Ms. Rizzi:

The California Department of Fish and Wildlife (CDFW) received a Notice of Intent to Adopt an MND from the Tuolumne County Community Resources Agency for the Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's Lake and Streambed Alteration (LSA) regulatory authority (Fish & G. Code, § 1600 *et seq.*). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 *et seq.*), related authorization as provided by the Fish and Game Code will be required.

Water Pollution: Pursuant to Fish and Game Code section 5650, it is unlawful to deposit in, permit to pass into, or place where it can pass into "Waters of the State" any substance or material deleterious to fish, plant life, or bird life, including non-native species. It is possible that without mitigation measures activities associated with construction of the Project could result in pollution of Waters of the State from storm runoff or construction-related erosion. Potential impacts to the wildlife resources that utilize these watercourses include the following: increased sediment input from road or structure runoff; toxic runoff associated with development activities and implementation; and/or impairment of wildlife movement along riparian corridors. The Regional Water Quality Control Board and the United States Army Corps of Engineers also has jurisdiction regarding discharge and pollution to Waters of the State.

Nesting Birds: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include, 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Unlisted Species: Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or Federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T, as specified in the CEQA Guidelines Section 15380, CDFW recommends it be fully considered in the environmental analysis for the Project.

PROJECT DESCRIPTION SUMMARY

Proponent: Hardin Flat, LLC/Under Canvas Inc.

Objective: The Project includes the development of an 80.1-acre site into a luxury tent campground ("glamping"). The site will include 99 luxury canvas tent sites, of which 77 would be deluxe/suite tents with bathrooms, while the remaining 22 tents would use a communal, centrally located bathroom. The Project also includes development of the following: two communal bathroom facilities, with showers; large reception/dining tent; spa tent; yoga deck; designated barbeque areas; designated fire pits; commercial kitchen trailer; laundry facility; temporary storage containers; in-ground swimming pool; well construction; septic tank and leach field; roads; parking; and associated power, water, and septic development.

Location: The Project will occur east of the community of Groveland and west of Yosemite National Park, adjacent to and south of Highway 120, within the southeastern portion of Section 26, Township 1 South, Range 18 East, Mount Diablo Baseline and Meridian, on Assessor's Parcel Numbers (APNs) 68-120-62 and 68-120-63, in Tuolumne County.

Timeframe: Unspecified.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Tuolumne County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

The Initial Study and Mitigated Negative Declaration (IS/MND) prepared for the Project indicates that the Project area has the potential to support sensitive biological resources. The Project therefore has the potential to impact these resources. CDFW recognizes that the IS/MND outlines mitigation measures to reduce impacts to biological resources. However, CDFW is concerned that, as currently drafted, these measures may not be adequate to reduce impacts to a level that is less than significant. Specifically, CDFW is concerned regarding adequacy of mitigation measures for the State Species of Special Concern California spotted owl (*Strix occidentalis occidentalis*) and northern goshawk (*Accipiter gentilis*), special-status plants, and waterway and riparian resources.

If significant environmental impacts will occur as a result of Project implementation and cannot be mitigated to less than significant levels, an MND would not be appropriate. Further, when an MND is prepared, mitigation measures must be specific, clearly defined, and cannot be deferred to a future time. As currently drafted the IS/MND defers mitigation to a future time. For example, Mitigation Measures (MM) BIO-1 and

BIO-3 defer mitigation by requiring that mitigation measures for special-status avian and plant species, respectively, be developed only in the event of their discovery during pre-construction surveys. For example, MM BIO-1 states that if active avian nests are found the Project proponent will notify CDFW and explain what mitigation measures will be implemented. Mitigation measures listed in an MND should be feasible, measurable, implementable and enforceable. When an Environmental Impact Review (EIR) is prepared, the specifics of mitigation measures may be deferred, provided the Lead Agency commits to mitigation and establishes performance standards for implementation. Regardless of whether an MND or EIR is prepared, CDFW recommends that the CEQA document provide quantifiable and enforceable measures, as needed, that will reduce impacts to less than significant levels.

I. Project Description and Related Impact Shortcoming

Would the Project 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 CDFW or United States Fish and Wildlife Service (USFWS)?

COMMENT 1: Vegetation Removal

Section: Agricultural and Forest Resources Section, Page 15 - 17

Issue: The IS/MND states that the Project would "remove the minimum number of trees possible," however, no other information is given. It is unclear the quantity, species, size, and location of the trees to be removed. Further, since the site will be developed, it is reasonable to assume that other trees and vegetation not directly related to construction activities may be removed for public safety purposes (i.e., hazard trees, fire hazard fuels reduction, etc.). The IS/MND does not fully disclose or analyze this impact, nor are mitigation measures included for the removal of vegetation. It is the responsibility of the Lead Agency to ensure that potential Project-related impacts are fully disclosed and analyzed, that mitigation measures are listed in the IS/MND and that they reduce impacts to less than significant levels.

Specific impact: Special-status species or their habitats may be present within the Project area and, given that that IS/MND currently lacks mitigation measures related to vegetation removal, these resources may not be identified or avoided during planned vegetation removal activities. As a result, Project activities have the potential to significantly impact special-status species. Potential impacts include injury, mortality, or reduced survivorship.

Evidence impact would be significant: Vegetation removal may result in the loss of special status-plant species and the loss of habitat that supports numerous special-status wildlife species. Clearing may also cause fragmentation and loss of sensitive habitats. The activities associated with clearing may also disturb associated soil seed banks that sustain local plant populations.

Recommended Potentially Feasible Mitigation Measure(s)

Recommended Mitigation Measure 1: CDFW recommends that all vegetation removal activities are fully analyzed and disclosed in the IS/MND, and that mitigation measures listed in the IS/MND are feasible, measurable, implemented, and enforced. This includes specifying the quantity, species, size, and location of trees that will be removed for construction-related activities and disclosing all other vegetation removal activities that will occur due to site development (i.e., hazard tree removal, fire hazard fuels reduction). CDFW recommends that larger-diameter trees in the Project area are retained, and snags, which provide nesting, foraging, roosting, and denning habitats, are also retained to the extent possible, a minimum mean value of three snags per acre is recommended (Richter 1993). CDFW further recommends that, prior to vegetation removal, a qualified biologist survey for the presence of special-status plants, suitable habitat for special-status wildlife species, and nesting birds (if Project activities will occur during the typical avian nesting season, February through mid-September) and that appropriate avoidance and minimization or mitigation plans be developed and required as conditions of approval for the Project.

Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS? Would the Project interfere substantially with movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede use of native wildlife nursery sites?

COMMENT 2: Waterways and Riparian Resources

Section: Biological Resources Section, Pages 22 - 41; and Hydrology and Water Quality Section, Pages 59 – 64.

Issue: The IS/MND includes a discussion about the aquatic resources, sensitive natural communities, and wildlife movement corridors present within the Project area, however, site-specific mitigation measures are not included. The IS/MND states that no construction, absent watercourse crossings, will occur within the 100-year floodplain, but it is unclear whether the 100-year floodplain has been or will

be delineated. Although the Tuolumne County Community Resources Agency has notified CDFW under Fish and Game Code Section 1602, the IS/MND does not disclose if Project-related activities will impact riparian habitat associated with on-site waterways or wetlands. Further, the IS/MND does not include mitigation measures to protect these sensitive resources during construction activities or during future land use. It is the responsibility of the Lead Agency to ensure that mitigation measures listed in the IS/MND are feasible, measurable, implemented, and enforced.

Specific impact: Watercourses and associated riparian habitat are of extreme importance to a wide variety of plant and wildlife species. Riparian and wetland habitat and the species that depend on them would be impacted by Project activities. Impacts would result from dust, Project site run-off, soil erosion, sedimentation, release of pollutants, and impacts to the soil seed bank.

Evidence impact would be significant: Approximately 21% of Sierran species depend on riparian habitat, and many more utilize this habitat for foraging, water, shelter, and migration. Further, impacts from changes to the riparian habitat and land disturbances can result in impacts and changes to the aquatic system (Kondolf et al. 1996). The Project could substantially adversely affect riparian habitats by resulting in loss or further destruction of these vulnerable habitat types.

Recommended Potentially Feasible Mitigation Measure(s)

Recommended Mitigation Measure 2: CDFW recommends that the IS/MND be edited to require that all delineated surface waters, wetlands, and associated riparian habitat be protected with appropriate buffers, based on attributes of the waterway, the riparian community, and hill-slope gradients and that these buffers be included as an enforceable condition to protect all surface waters and associated riparian vegetation. CDFW recommends that within this setback, no construction, fencing, lighting, septic systems, or wells be allowed. The setback is advised to be recorded on the parcel map as Open Space with the specific limitations identified above.

II. Mitigation Measure or Alternative and Related Impact Shortcoming

Would the Project 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 CDFW or USFWS?

COMMENT 3: Special-Status Avian Species

Section: Biological Resources Section, MM BIO-1, Page 39

Issue: The IS/MND indicates that the northern goshawk (NOGO) and California spotted owl (CSO), which meet the definition of rare or endangered under CEQA Guidelines section 15380, may occur in the Project area. MM BIO-1 proposes general nesting bird pre-construction surveys, and if active nests are found the Project proponent will notify CDFW and explain what mitigation measures will be implemented. MM BIO-1 also includes examples of measures that *may* be implemented. It is the responsibility of the Lead Agency to ensure that mitigation measures listed in the IS/MND are feasible, measurable, implemented, and enforced. Absent measures in the IS/MND meeting the CEQA Guidelines requirements, CDFW is unable to concur that potentially significant impacts to the species would be reduced to a less than significant level.

Specific impact: Without appropriate avoidance and minimization measures for NOGO and CSO, potential significant impacts associated with Project activities include loss of habitat, nest destruction or abandonment, loss or reduction of productivity, reduction in health and vigor of eggs and/or young, and direct mortality.

Evidence impact would be significant: Habitat for both species has been reduced in Sierra Nevada. Approximately 95% to 99% of the original ponderosa pine (*Pinus ponderosa*) old-growth forest has been lost in the Sierra Nevada, and habitat loss and degradation are the primary threats to both the CSO and NOGO (Shuford and Gardali 2008).

Recommended Potentially Feasible Mitigation Measure(s)
To evaluate potential impacts to NOGO and CSO, CDFW recommends conducting the following evaluation of the Project site and its vicinity and editing MM BIO-1 to include the following measures.

Recommended Mitigation Measure 3: If Project activities will occur during the typical avian nesting season (February through mid-September), CDFW recommends that potential nesting habitat for NOGO and CSO be surveyed by a qualified wildlife biologist, utilizing established protocols, prior to the commencement of Project activities. If nesting NOGO or CSO are found, CDFW recommends establishing a minimum ¼-mile no-disturbance buffer around active nests until the breeding season has ended, or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from this no-disturbance buffer may be implemented when there is compelling biological or ecological reason to do so. CDFW advises that any no

disturbance variance is informed through consultation with a qualified wildlife biologist and that CDFW be notified and consulted in advance of implementation of any buffer variance.

COMMENT 4: Special-Status Plant Species

Section: Biological Resources Section, MM BIO-3, Page 40

Issue: The IS/MND indicates that several special-status plants meeting the definition of rare or endangered under CEQA Guidelines section 15380 have the potential to occur in the Project area. MM BIO-3 proposes focused pre-construction surveys within the construction disturbance area, and in the event special-status plant species are found, requires the Project proponent to consult with CDFW for preservation and avoidance measures. MM BIO-3 also includes examples of measures that may be implemented. It is the responsibility of the Lead Agency to ensure that mitigation measures listed in the IS/MND are feasible, measurable, implemented, and enforced. Absent measures in the IS/MND meeting the CEQA Guidelines requirements, CDFW is unable to concur that potentially significant impacts to special-status plant species would be reduced to less than significant.

Specific impact: Without appropriate avoidance and minimization measures for special-status plants, potential significant impacts associated with subsequent construction include loss of habitat, loss or reduction of productivity, and direct mortality.

Evidence impact would be significant: Special-status plants identified in the IS/MND potential to occur in the Project area are threatened by recreational activities, grazing, logging, foot traffic, vehicles, development, non-native plants, herbicides, horticultural collection, reforestation, and habitat loss (CNPS 2018). Many of these threats have the potential to occur as a result of the Project.

Recommended Potentially Feasible Mitigation Measure(s)
To evaluate potential impacts to special-status plants, CDFW recommends conducting the following evaluation of the entire Project site and editing MM BIO-3 to include the following measures.

Focused Botanical Surveys

CDFW recommends that the Project site be surveyed for special-status plants by a qualified botanist following the "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities" (CDFW 2018). This protocol, which is intended to maximize detectability, includes the identification

of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period.

Special Status Plant Avoidance

CDFW recommends that special-status plant species be avoided whenever possible by delineating and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then CDFW recommends providing greater detail regarding alternate minimization and compensatory mitigation measures, such as reduced buffers, describing the intent and anticipated success of transplanting, and specifying success criteria for transplanted plants and related long-term protection and management that would occur under a conservation easement. In addition, please note that transplanting of a special-status species may require other authorization such as a Scientific Collecting Permit or, in the case of CESA-listed species, an Incidental Take Permit (ITP), pursuant to Fish and Game Code Section 2081(b), and include approval of the methods to be used in a transplanting project.

COMMENT 5: Artificial Lights

Section: Aesthetics Section, Page 13 - 14

Issue: The IS/MND states that all outdoor lighting will meet International Dark-Sky Association (IDA) standards. While CDFW supports to use of the IDA standards, these measures must be disclosed in the IS/MND and included as enforceable conditions of Project approval. Further, the artificial lighting discussion is only under the Aesthetics section, and it is unclear if outdoor artificial lighting impacts were also analyzed for potential impacts to biological resources. It is the responsibility of the Lead Agency to ensure that mitigation measures listed in the IS/MND are feasible, measurable, implemented, and enforced.

Specific impact: Project activities could result in disruption of wildlife behavior, inadvertent injury, or mortality.

Evidence impact would be significant: Night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for communication (i.e., bird song; Miller 2006), determining when to begin foraging (Stone et al. 2009), thermoregulation behavior (Beiswenger 1977), and migration (Longcore and Rich 2004). Even aquatic species can be affected; movement of fish and amphibians can be negatively impacted by the presence of artificial lighting (Nightingale et al. 2006, Perry et al. 2008). Phototaxis, a phenomenon which results

in attraction and movement towards light, can disorient, entrap, and temporarily blind wildlife species that experience it (Longcore and Rich 2004).

Recommended Potentially Feasible Mitigation Measure(s) (Regarding Mitigation Measure or Alternative and Related Impact Shortcoming)

Recommended Mitigation Measure 4: CDFW recommends that the IS/MND include an analysis of artificial lighting as it relates to biological resources and incorporate enforceable mitigation measures to decrease the impacts of artificial outdoor lighting on wildlife species. Potentially feasible mitigation measures include: motion sensitive lighting; mounting light fixtures as low as possible to minimize light trespass; use of light fittings that direct and confine the spread of light downward; and use of long-wavelength light sources. In addition, CDFW recommends that lighting is not installed in ecologically sensitive areas (i.e., streams, wetlands, and habitat used by special-status species, such as nesting/roosting sites and riparian corridors) and the use of the white/blue wavelengths of the light spectrum be avoided.

III. Editorial Comments and/or Suggestions

Conversion of Timberlands:

The Agricultural and Forest Resources Section (pages 15 – 17) of the IS/MND states that approximately 20.1 acres of the Project site was burned during the 2013 Rim Fire, and that fire-killed trees have been removed. Other than this statement, the IS/MND does not disclose past timber harvesting on the Project site. Based on the Department of Forestry and Fire Protection's (CALFIRE) Emergency Notices of Timber Operations, it appears the above timber harvest operations were conducted under the CALFIRE Emergency No. 4-13EM-020-TUO, approved by CALFIRE on November 8, 2013. In addition, a CALFIRE Drought Mortality Exemption, No. 4-16EM-729, was approved by CALFIRE on August 22, 2016, and there is an active Non-Industrial Timber Management Plan (NTMP), No. 4-91NMTP-001, for the property. The NTMP is not disclosed in the IS/MND, and it is unclear if this Project is allowed under the conditions of the NTMP. Further, based on these past commercial timber operations on the property, it is clear the property meets the definition of timberland (as defined by Public Resources Code section 4526). The IS/MND briefly discusses a CALFIRE less than three-acre conversion exemption, however, the Project site and disturbance area are larger than three acres. It is unclear if a CALFIRE Timberland Conversion Permit, pursuant to Title 14 of the California Code of Regulations section 1100, has been approved for this Project.

CDFW recommends that the Project proponent consult directly with CALFIRE to determine if a Timberland Conversion Permit is required. CDFW recommends that this consultation, obtaining a Timberland Conversion Permit (if required), and all other CALFIRE requirements for the conversion of timberlands are included as enforceable conditions of the IS/MND and grading permit issued by the County.

Urban/Wildlife Conflict:

Several wildlife species that often result in urban/wildlife conflicts are present in the Project area. These species include, but are not limited to, black bear, mountain lion, coyote, deer, raccoon, skunk, and bat species. Direct and indirect human interactions with some of these species can result in human fatalities, injury, and loss of property, as well as wildlife injuries and fatalities. Animals that become either a nuisance or a threat because of inappropriate interactions with people often must be relocated or destroyed. CDFW recommends the IS/MND address the potential problems associated with urban/wildlife interactions and the potential associated impacts to wildlife, including impacts by additional human disturbance (i.e., pets, traffic, trash, etc.); and interference with migration/life history patterns (i.e., migration corridors, foraging habitat, etc.). CDFW also recommends the Project proponent develop a plan to avoid and minimize urban/wildlife conflicts, such as developing educational materials for guests and installing signage around ecologically sensitive areas.

Nesting Birds:

Habitat within the Project area likely provides nesting habitat for birds. MM BIO-1 includes conducting general pre-construction nesting bird surveys, however, in the event of detection, no enforceable mitigation measures are described. CDFW encourages Project implementation occur during the avian non-nesting season. However, if ground-disturbing activities must occur during the breeding season (February through mid-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above.

To evaluate Project-related impacts on nesting birds, CDFW recommends that a qualified wildlife biologist conduct pre-activity surveys for active nests no more than 10 days prior to the start of ground disturbance to maximize the probability that nests that could potentially be impacted are detected. CDFW also recommends that surveys cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. In addition to direct impacts (i.e., nest destruction), noise, vibration, odors, and movement of workers or equipment could also affect nests. Prior to initiation of construction activities, CDFW recommends a qualified biologist conduct a survey to establish a behavioral baseline of

all identified nests. Once construction begins, CDFW recommends a qualified biologist continuously monitor nests to detect behavioral changes resulting from the Project. If behavioral changes occur, CDFW recommends halting the work causing that change and consulting with CDFW for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum 250-foot no-disturbance buffer around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no-disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNDDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

If it is determined that the Project has the potential to impact biological resources, an assessment of filing fees will be necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the IS/MND to assist the Tuolumne County Community Resources Agency in identifying and mitigating Project impacts on biological resources.

More information on survey and monitoring protocols for sensitive species can be found at CDFW's website (https://www.wildlife.ca.gov/Conservation/Survey-Protocols). Questions regarding this letter or further coordination should be directed to Margarita Gordus, Senior Environmental Scientist (Specialist) at (559) 243-4014 Extension 236, or by email at Margarita.Gordus@wildlife.ca.gov.

Sincerely,

Julie A. Vance
Regional Manager

ec: Office of Planning and Research, State Clearinghouse, Sacramento
State.Clearinghouse@opr.ca.gov

REFERENCES

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Making Conservation a California Way of Life.

March 25, 2019

10-TUO-120 Post Mile (PM) R50.350
Yosemite Under Canvas
SDP18-002 IS/MND
SCH#: 2019029073

Ms. Natalie Rizzi, Project Planner
County of Tuolumne
Community Resources Agency
2 South Green Street
Sonora, CA 95370

Dear Ms. Rizzi:

The California Department of Transportation (Caltrans) appreciates the opportunity to review the Yosemite Under Canvas IS/MND (State Clearinghouse Document number 2019029073) to allow the development of 99-unit luxury tent campground ("glamping") site and supporting facilities such as a mobile kitchen, dining and reception tent, laundry facility, and bathrooms. The project site consists of two parcels totaling 80.1± acres and is located south of the intersection of Hardin Flat Road and State Route (SR) 120 on Assessor's Parcel Numbers (APNs) 068-120-062 and 068-120-063.

Caltrans has previously commented on the Tuolumne County Community Resources Agency (TCCRA) Site Development Permit SDP 18-002 and provided comment letters on August 6, 2018 and August 24, 2018. Caltrans has the following comments on the Yosemite Under Canvas IS/MND:

On Page 61, section c and d indicate locations for potential stormwater treatment areas (grass buffers and detention ponds) are shown in Attachment A within Appendix A. However, Attachment A does not provide a drainage plan. Caltrans would like to review the Drainage Plans mentioned in Mitigation Measure HYDRO-3 when they are available to verify that run-off would be contained on-site.

The proposed site plan will only have access on Hardin Flat Road. The proposed access on Hardin Flat Road is not shown according to the proximity to the State Highway. The proposed access will need to be the furthest away possible in order to prevent any spillage onto the State Highway.

Please provide the location of the driveway and display the location via mapping with measurements (in feet) clearly showing distance to SR 120.

Any proposed directional signs need to be installed by the applicant outside of the State right of way and in accordance with State Outdoor Advertising Program regulation and Federal laws.

Caltrans recommends that traffic impact fees be collected for future multimodal improvements to reduce vehicle miles traveled (VMT) and to mitigate cumulative impacts to the State Highway System.

An encroachment permit will be required for project construction activities that encroach into the SR 120 right of way. The project proponent must submit an application for an encroachment permit to the Caltrans District 10 Permit Office. The County environmental document and appropriate environmental studies must be submitted with this application. These studies will include an analysis of potential impacts to any cultural sites, biological resources, hazardous waste locations, and/or other resources with the SR 120 right of way at the project site(s).

If you have any questions or would like to discuss these comments, please contact Austin Sos at (209) 948-7936 (e-mail: austin.sos@dot.ca.gov), or me at (209) 948-7325 (e-mail: gregoria.ponce@dot.ca.gov).

Sincerely,

GREGORIA PONCE, Chief
Office of Rural Planning

c: David Gonzalves, Director, Tuolumne County Community Resources Agency
Darin Grossi, Executive Director Tuolumne County Transportation Council