

INITIAL STUDY/ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION					
1. Project Title:		Forbestown Shaded Fuel Break			
2. Lead Agency Name and Address:		Butte County Resource Conservation District 150 Chuck Yeager Way, Suite A Oroville, CA 95695			
3. Contact Person and Phone Number:		Kelli Miller (530) 534-0112			
4. Project Location:		Portions of Forbestown Road, Lower Forbestown Road and Black Bart Road within T19N R6E Sections 17, 19, 20, 30			
5. Project Sponsor's Name and Address:		High Sierra RC&D 560 Wall St, Suite F Auburn, CA 95603			
6. General Plan Designation:		Foothill Residential/ Timber Mountain			
7. Zoning:		Agriculture Rural Rosenthal Timber Preserve Zone			
8. Project Description: Refer to pages 5 of this document					
9. Surrounding Land Uses and Setting:		Refer to page 7 of this document			
10: Other public agencies whose approval may be required:		Butte County Public Works Department County Road Encroachment Permit if project work will enter the County road right-of-way California Department of Fish and Game Streamside Alteration Agreement (1600 Permit) would be required if any project equipment crosses a stream zone or riparian area. <i>*These actions are not anticipated</i>			
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:					
The environmental factors checked below are the ones which would potentially be affected by this proposed project and were more rigorously analyzed than the factors which were not checked. The results of this analysis are presented in the detailed Environmental Checklist which follows.					
<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry Resources	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Geology / Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards & Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology / Water Quality

<input type="checkbox"/>	Land Use / Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population / Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation / Traffic	<input type="checkbox"/>	Utilities / Service Systems	<input type="checkbox"/>	Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

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

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.

 Mary Thompson, President
 Butte County Resource Conservation District,
 150 Chuck Yeager Way, Suite A
 Oroville, CA 95965

 Date Signed

ANALYSIS OF POTENTIAL ENVIRONMENTAL IMPACTS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Will the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which will adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) *Would the project have a substantial adverse effect on a scenic vista?*

The project area is remote and located in a portion of Butte County used primarily for rural home development, grazing, timber production and wildlife management. The view shed of Phase 3 and 5's project impact areas as well as those of the Forbestown Shaded Fuel Break's other phases are from the paved Forbestown Road, a main arterial route used by local landowners, timber managers and hunters. Portions of the Phase 3 and Phase 5 project area also contain lesser used paved and unpaved roads including Black Bart Road, Lower Forbestown Road and a number of unnamed and unpaved wildland roads. Other lightly used rural roads are found throughout other portions of the overall Forbestown Shaded Fuel Break project area. The current view is of dense over stocked second and third growth conifer forests containing a large percentage of small suppressed and unhealthy fir, pine and oak species. This current unnatural view will change as numerous small unhealthy trees 10" in diameter and under (oaks 6" in diameter and under) along with a number of dead hazard trees will be removed through mastication. In more open areas, thick stands of Manzanita and other chaparral species will be pushed in place, crushed and incorporated into the soil surface. It is anticipated that the health of remaining trees will improve and their growth rate increased through the removal vegetative competition. As a result of the expanding forest canopy, brush and shade intolerant tree species will be shaded out thus prolonging the useful life of the fuel break between treatments. In addition, the removal of dense forest thickets and brush will improve views of the Sacramento Valley floor from the project area and return roadside vegetation to more natural aesthetic condition.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

The project area is not within the viewshed of a scenic highway nor will it damage any scenic resources. It is anticipated that project work will improve the view of historic buildings and other roadside scenic resources along with the Central Valley floor to passing motorist.

c) *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

In the short term, the visual character of the project area would change through the removal of some trees and brush however; road side and distant views will improve. In the long term, conifer and chaparral stands along Forbestown Road, Lower Forbestown Road, Black Bart Road and the lightly used unpaved roads within the larger project area will respond to thinning treatments resulting in healthier trees, a reduction in brush species and more natural view conditions.

d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

No new sources of light or glare would be created by the execution and completion of project work.

No impacts to Aesthetics are anticipated.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forest Resources.				
<p>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, as updated) 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:</p>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) ***Would the project 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?***
- None of the land within the project area is classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.
- b) ***Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?***
- Project work would not change land use within the project area or on surrounding lands and thus would not conflict with existing zoning for agricultural activities or Williamson Act contracts.

- c) ***Would the project conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104(g))?***

Project work would entail vegetation treatments that are commonly used in the management of forest stands or other wildlands and as a result would not conflict with existing zoning or cause rezoning of forest land, timberland or timberland zoned Timberland Production.

- d) ***Result in the loss of forest land or conversion of forest land to non-forest use?***

Project work would entail only removal of suppressed trees and excess brush within dense conifer forests and chaparral stands. The removal of this unnaturally dense vegetation will create more natural conditions within roadside forests and improve the health of forest species. Project work will be conducted largely within and immediately adjacent to the Forbestown Road, Lower Forbestown Road and Black Bart Road right-of-way. Fuel treatments will also occur along a number of unpaved roads and consequently will not impact large acreages of forestlands that are a distance from already developed roadside areas. In addition, these treatments will not be completed to a degree that will result in forestlands being converted to non forestland uses.

- e) ***Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?***

The fuel breaks being completed in connection with project work would not be developed to an extent so that the project area could be used for activities which would result in the conversion of agricultural land to non-agricultural uses nor would its existence lead to future development that could result in this kind of land use conversion.

No impacts to Agricultural and Forest Resources are anticipated

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations. Will the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Air Quality standards are based upon provisions of the Federal and State Clean Air Acts. The Butte County Air Quality Management District is responsible for the planning, maintenance and attainment of these standards at the local level. Butte County has been designated as non-attainment area for state and federal ambient ozone standards and California inhalable particulate matter (PM₁₀) standards. Wildland fires can contribute to the release of particulate matter into the atmosphere. This project is expected to reduce fuel loading conditions that will lead to a reduction in the threat of large scale catastrophic wildfires that release large amounts particulate matter. No burning will occur as a result of this project’s implementation. Finally, standard operating requirements issued by the Butte County Air Quality Management District will apply to the execution of this project’s work scope. These include the requirement that all heavy equipment be registered with the State Portable Engine Registration Program as well as implementation of Rule 205 related to fugitive dust.

Would the Project

a) Conflict with or obstruct implementation of the applicable air quality plan?

Fuel treatments to be conducted in connection with this project include cutting, masticating, crushing or piling of conifer and chaparral vegetative material. Equipment (dozers, masticators and power hand tools) to be used in the execution of project work will be operated under current Californian Air Regulations as enforced by the Butte County Air Quality Management District. The limited effects to air quality that will result either directly or indirectly from this project would be of a short term nature. Consequently, implementation of project work will not conflict with or

obstruct the development or implementation of Butte County's Air Quality Plans nor will it conflict with any State Air Quality Plans.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Equipment to be used in the execution of project work will be operated under current Californian Air Regulations as enforced by the Butte County Air Quality Management District.

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)?

Equipment to be used in the execution of project work will be operated under current Californian Air Regulations as enforced by the Butte County Air Quality Management District. No burning will be completed in the execution of project work. Such vegetation management techniques may however be conducted separately in the future by individual public and private land managers. These burns would fall under the same County air regulations as the various phases of the Forbestown Shaded Fuel Break.

d) Expose sensitive receptors to substantial pollutant concentrations?

The Forbestown Shaded Fuel Break project area is located in relatively remote portion of Butte County and Yuba County. The nearest sensitive receptors include the community of Forbestown along with scattered rural residential parcels located within the overall project area. The only air pollutants that will be generated in connection with Phase 3 and Phase 5 project work will be from the exhaust of equipment used in the execution of project work. This equipment will be operated under current Californian air regulations as enforced by the Butte County Air Quality Management District. No burning will be conducted in completing project work. Such vegetation management techniques may however be conducted separately in the future by individual public and private land managers once all phases of the Forbestown Shaded Fuel Break have been completed. Any future burning would fall under the same County air regulations as the various phases of the Forbestown Shaded Fuel Break.

e) Create objectionable odors affecting a substantial number of people?

Execution of project work will result in minor releases of exhaust smoke from regulated equipment used in the completion of project work. Given that this equipment's operation will occur only within remote locations, any odors or minor pollutants generated in connection with project work will not affect substantial numbers of people.

No impacts to Air Quality are anticipated

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Will 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 the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potential Impacts

The Forbestown Shaded Fuel Break will create more natural open stands of pine and mixed conifer forests that are now thickets of second and third growth intermediate and sapling sized trees. Unnaturally dense stands of old growth chaparral that have not burned in many years will be reduced within open areas. Openings created within these stands of vegetation could lead to localized habitat fragmentation and predation of those smaller species that use decadent chaparral vegetation as habitat. Significant amounts of similar vegetation will remain within the Phase 3 and Phase 5 project areas once project work is completed. In addition, sites surrounding these areas also contain significant amounts of such vegetation. It is anticipated that a reduction in overly dense stands of small trees (those 10" DBH and under and oaks under 6" DBH) as well as tall dense chaparral will allow more sunlight and moisture to reach the soil surface. As a result, an increase in germination of grasses, herbs and flowering plant species that grow at the soil surface is anticipated.

Large “No Treatment Zones” will be created along stream courses both wet and dry as well as around springs and other wet areas. “No Treatment Zones” will also be created along canals, ditches and other man made water courses which can serve as surrogates for aquatic, mesic and riparian habitats. These buffers will protect a wide variety of riparian species and vegetation age classes. They will also act as filtering strips for any minor amounts of sediment that could be generated in connection with project work. It is anticipated that sediment generation will be minimal given the type of treatments to be conducted and the large amount of crushed and treated woody debris that will be left on the soil surface as a result of Phase 3 and Phase 5 project work.

Upland chaparral species found within the more impacted portions of the project area will begin to sprout within several weeks after treatments and will rapidly increase in size during the first two to three years after impacts. As a result, if habitat fragmentation occurs due to project work, it will be for a relatively short period of time and within a very small portion of a much larger landscape. In addition, vegetation treatments will only occur outside the nesting and breeding periods of all potential local avian species and blooming periods of listed plant species. No significant impacts to biological resources are anticipated given the design of the Phase 3 and Phase 5 work scopes as well as the project specific Mitigation Measures listed below.

Formally Listed Species Found in the Immediate Vicinity

In consideration of the area covered by the various phases of the Forbestown Shaded Fuel Break Project, a twelve quadrangle check was made of the Department of Fish and Game’s California Natural Diversity Database (CNDDDB) during August 2010. The Cal Fish database along with a number of other references including the California Department of Fish and Game California Interagency Wildlife Task Group’s Wildlife Habitat Relationships System and other sources were also reviewed in order to determine the possible occurrence of upland, avian, amphibian, aquatic and anadromous species. The following results relate to listed Endangered, Threatened, or Sensitive Species (List 1, List 2 and List 3) as well as those plants listed in the California Native Plant Society’s **Inventory of Rare, Threatened, and Endangered Plants of California**.

**Quadrangles Used For California Natural Diversity Database Check
Of the Forbestown Shaded Fuel Break Project Area**

Bangor	Berry Creek	Brush Creek
Cascade	Challenge	Clipper Mills
Forbestown	French Corral	Loma Rica
Oregon House	Oroville Dam	Rackerby

California Department of Fish and Game Species of Special Concern

Under California law, Species of Special Concern are to be considered during the environmental review process. The California Environmental Quality Act (CEQA; California Public Resources Code §§ 21000-21177) requires State agencies, local governments, and special districts to evaluate and disclose impacts from "projects" in the State. Section 15380 of the CEQA Guidelines indicates that species of special concern should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined in State regulations.

1 = Federal Endangered	2 = Federal Threatened
3 = California Endangered	4 = California Threatened
5 = California Fully Protected	6 = California Protected
7 = California Species of Special Concern	8 = Federally Proposed Endangered
9 = Federally Proposed Threatened	10 = Federal Candidate
11 = BLM Sensitive	12 = USFS Sensitive
13 = CDF Sensitive	14 = Harvest

Mammals

Pacific Fisher (*Marten pennanti (pacifica) DPS*)^{7, 10}: The Pacific Fisher is listed as a Federal Candidate Species and State "Species of Special Concern under California law. *Martes pennanti* is a specialized forest carnivore that is associated with closed-canopy, late-succession forests throughout its range. The Forbestown Shaded Fuel Break project area is located within chaparral lands along with low elevation second and third growth pine/mixed conifer forests. Consequently, it is unlikely that this species will occur within the project's impact area. If the Pacific Fisher is observed during project work, observation areas and any denning sites will be identified and flagged by the Project Manager. These sites will then be avoided by equipment and personnel.

Pallid Bat (*Antrozous pallidus*)⁷: *Antrozous pallidus* generally inhabits shrublands, woodlands, grasslands and occasionally cottonwood-riparian zones within those habitats. The pallid bat is sensitive to human disturbance and recreational activities may impact roosting bats sometimes resulting in the abandonment of young and roosts. It is most common in areas having rocky outcroppings, particularly near water. During summer months this species usually roosts in rock crevices, rock piles, tree cavities, shallow caves, and abandoned mines. Fuel break implementation has been designed so that no rocky outcroppings will be impacted. No large trees of a size suitable for nesting will be

impacted within the project area's chaparral belt or its small portion near the timberline. Project work is expected to be completed rapidly. Consequently if this species were present within the project's impact area, it would only be disturbed for a short period of time (one to two days) and only during daylight hours. After that, noise and activity levels within a particular portion of the project area would return to pre project levels. Although there are rocky sites within the general area, no rocky outcrops suitable for roosting exist within the project's impact area. In addition, no impacts will occur to any caves, mines or built structures which could serve as roosting sites. Consequently even if this species were present within the project area no significant impacts to individuals or habitat are anticipated.

Western Red Bat (*Lasiurus blossevillii*):^{7,12} This species of medium-sized bat is born from late spring to early summer. It roosts in the foliage of large shrubs and trees, usually sheltering on the underside of overhanging leaves. Roosting habitat is found in woodland borders and rivers. Roost sites have been found in edge habitats adjacent to riparian areas. Roost trees are typically large diameter cottonwoods, and willows associated with riparian habitats. Foraging occurs in and amongst vegetation and this species forages regularly over the same territory. Foraging has been noted in habitats such as oak woodland, low elevation conifer forest and along riparian corridors. This species may forage in habitats adjacent to streams and rivers that do not provide roosting habitat. Other requirements include undisturbed foliage roost sites that provide protection from predators along with structurally diverse vegetation that support a variety of insect prey habitat. It is also found to be less abundant in low and middle elevations of mixed conifer forests. The western red bat was ranked in the top five species of conservation concern as less than 6% of relatively intact old growth, riparian forest remains.

Given the level of agency concern over the long term viability of Western Red Bat populations and the important role riparian corridor species play in the bats natural history, the Forbestown Shaded Fuel Break work scope along with numerous Mitigation Measures have been developed in a manner that will protect this wildlife resource. Included are wide riparian "No Treatment Zones". Of equal importance to the long term viability of this species is the fact that the level of fuels management afforded by this project will significantly reduce the risk of catastrophic wildfire that could inundate the area's riparian zones. The fuel break's importance in controlling wildfire will also help to protect the upslope conifer forest habitats utilized by this species. Finally, through vegetation treatments within decadent chaparral stands and unnaturally dense suppressed conifer stands, structural diversity will be returned to the area's vegetation which is important to the variety and availability of the Western Red Bat's insect food source.

Fish

No listed fish species were identified during the August 2011 CNDDB database search.

Birds

BALD EAGLE (*Haliaeetus leucocephalus*):^{3,5} *Haliaeetus leucocephalus* has been delisted as a federally threatened species. The Bald Eagle requires large bodies of water or free flowing rivers with abundant fish. Snags, stoutly limbed or broken-topped trees and large rocks are used as streamside hunting perches. It roosts in dense, sheltered and remote conifer stands containing large old-growth or dominant live trees having open branchwork. Nesting occurs most frequently in stands with less than 40% canopy and having some foliage to shade the nest. Stick platform nests are generally built on the largest tree in a stand usually between 50' and 200' above the forest floor just below the crown. Nests are usually located near a permanent water source. In California, it has been determined that 87% of nest sites are within 1 mile of water. The Bald eagle's breeding period is between February and July with peak activity between March and June. Nesting normally does not occur if human disturbance is evident.

There are no large bodies of water or major streams flowing through the project area. The closest significant water course is the Feather River's South Fork which is located roughly two miles north of the project area. In addition, the pine/mixed conifer forests within the project area consist of smaller second growth stands containing extensive fir thickets. Forbestown Road is a heavily used transportation route and both Lower Forbestown Road and Black Bark Road are relatively well used roads. As a result there is considerable traffic disturbance that would reduce the probability of the area containing Bald Eagle nests. Finally, it is anticipated that through the removal and control of excess vegetation, superior Bald Eagle habitat further upslope and outside the Forbestown Shaded Fuel Break project area will be protected from catastrophic wildfire.

Black Swift (*Cypseloides niger*):⁷ The Black Swift breeds very locally in the Sierra Nevada and Cascade Range. Nests are usually located in moist crevices, caves, or overhangs on cliffs adjacent to, waterfalls in deep canyons. Breeding season lasts from early June to late August. If suitable nest sites are available for breeding, Black Swifts will forage widely over many habitats, feeding exclusively on flying insects. The Black Swift does not winter in the state. Migrating south for the winter it is mostly absent from October through April. The presence of the Black Swift is not anticipated as there are no moist crevices or caves of cliffs within the project's impact area.

California Black Rail (*Laterallus jamaicensis coturniculus*):^{4,5} The California Black Rail is listed as a State Threatened and State Fully Protected species. It is also on the USFWS Region 1 list of Birds of Conservation Concern which includes those species considered potential candidates for federal listing. The California Black Rail is most often found in tidal marshes and has also recently been found at several inland freshwater marsh sites in the Sierra Nevada foothills of Butte, Yuba, and Nevada Counties. They are a highly secretive and rarely observed bird that tends

to inhabit vegetation that provides both a dense canopy for protective cover along with nesting habitat and accessibility below the canopy. Rails are susceptible to predation and a dense canopy that provides optimal cover is essential for survival.

Freshwater marshes are typically dominated by bulrushes (*Scirpus* spp.) and cattails (*Typha* spp.). These sites are very shallow but require a perennial water source. As a result there is a possibility that these rails can be found at a number wet areas both natural and manmade. Very little information is available on seasonal patterns, timing of reproduction, dispersal, or other activities. The breeding season begins as early as February with pair formation. Egg laying peaks around May 1, with a 17 to 20-day incubation period. Although rails are considered year round residents in the Sierra Nevada foothills, seasonal movements including juvenile dispersal and adult relocation to other wetland breeding sites occur each year. This can sometime occur during the nonbreeding season between approximately August and February. Given the possibility that this State Threatened species could be found in wet areas located within the Forbestown Shaded Fuel Break project area, Mitigation Measure #1 was developed as a means to protect aquatic and riparian habitats along with potential rail habitat located around springs, man made water conveyance structures and various wet areas.

NORTHERN GOSHAWK (*Accipiter gentilis*):^{7,13} *Accipiter gentilis* occupies dense middle and high elevation old growth conifer forests. The species nests near riparian areas and open meadows containing water and are interspersed within the densest portions of forested areas. It also utilizes large live trees with diameters of 11” and greater for nesting and breeding sites during the period of April through mid June. Project work is not anticipated to impact this species as wide “No Treatment Zones” will be established along all riparian corridors, the project’s impact area contains no open meadows and project work will be completed prior to the nesting and breeding season. Finally, no trees or standing snags over 10” in diameter will be cut or otherwise treated.

OSPREY(*Pandion haliaetus*): The Osprey is on the Department of Fish and Game Watch List and is associated strictly with large, open clear fish-bearing waters, primarily in Ponderosa pine and Mixed conifer habitats which are used for foraging. It breeds in northern California from the Cascade Ranges south to Lake Tahoe. Regular breeding sites include inland lakes, reservoirs, and river systems. The Osprey preys mostly on fish and requires open, clear waters for foraging. A few mammals, birds, reptiles, amphibians, and invertebrates are also included among its prey. It uses large trees, snags, and dead-topped trees in open forest habitats for nesting and cover. Nesting occurs on platform of sticks at the top of large snags, dead-topped trees, cliffs and human made structures. Nest may be as much as 250’ above ground or occasionally at ground level within 1,300’ of fish-producing water, but may nest up to 1 mile from water. Tall, open-branched “pilot trees” located nearby are used for landing before approaching the nest, and for use by young for flight practice. Nest trees averaged 68” dbh ranging between 30” to 81’ dbh in northern California. Nest height averaged 135 ft. Osprey arrives on nesting grounds from mid-March to early April. It migrates south along the

coast and western slope of Sierra Nevada in October to Central and South America. Breeding season runs from March to September.

There are no large bodies of water or major streams flowing through the project area. The closest significant water course is the Feather River's South Fork which is located more than two miles north of the project area. In addition, the pine/mixed conifer forests within the project area consist of smaller second growth stands containing extensive fir thickets and few large trees or snags that are important to the Osprey's nesting and roosting behavior. Forbestown Road is a heavily used transportation route and both Lower Forbestown Road and Black Bark Road are relatively well used roads. As a result there is considerable traffic disturbance that would reduce the probability of the area containing Osprey nests. It is anticipated that through the removal and control of excess vegetation, superior Osprey habitat located upslope from the Forbestown Shaded Fuel Break project area and adjacent to the Feather Rivers will be protected.

Tricolored Blackbird (*Agelaius tricolor*):⁷ *Agelaius tricolor* is a DFG Species of Special Concern. Common locally throughout the Central Valley, it nests and breeds near fresh water, preferably in emergent wetland with tall, dense cattails or tules as well as in thickets of willow, blackberry, wild rose and tall herbs. Its breeding territory normally includes only the immediate area around the nest and its usual breeding period is mid-April into late July. Nests are usually located a few feet over, or near, fresh water or may be hidden on the ground among low vegetation. Nest may be located up to 4 miles from foraging areas and are usually located a few feet over or near, fresh water. The species feeds in grassland and cropland habitats utilizing mostly insects and spiders. Seeds and cultivated grains are another major food source which is collected through foraging on the ground in croplands, grassy fields, flooded land, and along the edges of ponds located up to approximately 4 miles from nests. The Tricolored Blackbird seeks cover in emergent wetland vegetation, especially cattails and tules along with trees and shrubs. It roosts in large flocks located within emergent wetlands or in trees. Being highly colonial, nesting areas must be large enough to support a minimum colony of about 50 pairs.

The presence of *Agelaius tricolor* within the project area is not anticipated as the species needs proximity to fresh water tules or wetlands none of which are found within the projects impact area. There are no extensive grasslands within the project area which could be used as forage sites. It is anticipated that with the removal of dense vegetation, grass species will germinate and develop creating a local food sources for individuals that inhabit wetlands in the vicinity of New York Flat located approximately one mile east of the project area. If individuals do inhabit streamside, riparian or other wet areas, these sites will be protected by the provisions of Mitigation #1.

Amphibians

California Red Legged Frog (*Rana aurora draytonii*):^{2,7} The California Red Legged Frog is highly aquatic with little movement away from streamside habitat during the dry season. Individuals found in interior areas of California tend to hibernate in burrows during winter months. Burrows are also used for temporary retreat during periods of activity. California red-legged frogs live in a Mediterranean climate, which brings about temporal and spatial changes in habitat quality. Almost the entire landscape, including breeding ponds and streams, may become suitable habitat for the adults during periods of above average rainfall. Conversely, habitat that is suitable may be drastically reduced during periods of prolonged drought. Due to this variability, population sizes can vary widely from year to year. During years when aquatic habitat (ponds and streams) is abundant as a result of adequate rainfall, the California red-legged frog can produce large numbers of dispersing young, resulting in an increase in the number of occupied aquatic and riparian sites. In contrast, this species may temporarily disappear from an area during periods of extended drought. Consequently, it is essential to provide for through protection, sites that can be recolonized during wet periods. The most important of these recolonization areas include breeding ponds, slow-flowing stream reaches and deep pools within a stream with vegetation or other material to which egg masses may be attached. These areas must hold water long enough for tadpoles to complete their metamorphosis into juvenile frogs that can survive outside of water. Field observations indicate that juveniles inhabited a wide variety of habitats while adults primarily inhabited deep pools*. Any upland burrows would not be affected by project work as all impactful activity will occur exclusively in the early spring and early to mid fall period and only at the soil surface. Protection will be afforded to this species aquatic and riparian habitat through the provisions of Mitigation Measures #1.

**From Federal Register / Vol. 75, No. 51 / Wednesday, March 17, 2010, Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the California Red-Legged Frog, Final Rule*

Foothill Yellow Legged Frog (*Rana boylei*):⁷ This aquatic species requires shallow, flowing water, found in small to moderate-sized streams with at least some cobble-sized substrate. This type of habitat is best suited to oviposition and provides significant refuge habitat for larvae and postmetamorphs. Foothill yellow-legged frogs are infrequent or absent in habitats where introduced aquatic predators such as fishes and bullfrogs are found including small streams and wet areas. A map displaying extant and verified sightings of this species is found in the 1994 edition of the CDFA's "Amphibian and Reptile Species of Concern Within California" indicated that this species could be within the project area. In the event that individuals of this species are present within the riparian corridors of the project area, they will be protected by the provisions of Mitigation Measure #1.

Sierra Nevada Yellow-Legged Frog (*Rana sierrae*):^{7,10} In addition to being classified as a Federal Candidate species and a State Species of Special Concern, *Rana sierrae* (formerly *Rana muscosa* Mountain Yellow-legged Frog) is classified as a State Candidate (Endangered) species. This amphibian is always encountered within a few feet of water and is associated with streams, lakes and ponds located in montane riparian, and a variety of other habitats. Breeding

begins after ice-melt and can range from April at lower elevations to June and July in higher elevations. The length of the larval stage depends upon the elevation. At lower elevations tadpoles are able to grow to metamorphosis in a single season. At higher elevations tadpoles may take 2 or 4 years of growth before they are large enough to transform. Significant seasonal movements or migrations have not been reported for this species. Considering the very specific habitat requirements of Rana sierrae and the lack of movement or migration throughout its life stages, it is anticipated that the protections afforded by Mitigation Measure #1 will adequately protect the Sierra Nevada Yellow Legged Frog.

Western Spadefoot Toad (*Spea hammondi*):⁷ The Western spadefoot toads require two distinct habitat components to complete it's life cycle and these normally need to be in close proximity. These include the presence of an aquatic habitat for breeding and a terrestrial habitat for feeding and estivation. Western spadefoot toads are mostly terrestrial using upland habitats to feed and burrow in for their long dry-season dormancy. Current research on amphibian conservation suggests that average terrestrial habitat use is within 368 meters (1,207 feet) of aquatic habitats. Western spadefoot toads lay their eggs in a variety of permanent and temporary wetlands including rivers, creeks, pools in intermittent streams, vernal pools, and temporary rain pools as well as stock ponds. This species reproduces in water when temperatures are between (48°F and 86°F), and water must be present for more than three weeks for metamorphosis to be completed. Optimal habitat used for reproduction must be free of native and nonnative predators such as fishes, bullfrogs, and crayfishes. Western spadefoot toads typically inhabit lowland habitats such as washes, floodplains of rivers, alluvial fans, playas, and alkali flats. This species may also be found in the foothills and mountains. Western spadefoot toads select areas with sandy or gravelly soil with open vegetation and short grasses. Vegetation communities where this species may occur include valley and foothill grasslands, open chaparral, and pine-oak woodlands. Areas of impact related to this project are within dense stands of young second growth mixed conifer species, white fir thickets and decadent chaparral. All annual and perennial stream channels, manmade water conveyance structures, springs, wet areas and other aquatic habitats will be protected by wide "No Treatment Zones" where no project impacts will occur (see Mitigation Measure #1).

Reptiles

Western Pond Turtle (*Emys marmorata*):⁷ *Emys marmorata* is listed as Species of Special Concern throughout Northern California. This species requires some slack or slow water aquatic habitat as is found in low gradient streams and ponds. As a result it is uncommon within high gradient streams that occur within the project area. The steepness of stream gradients within this portion of Butte County result in water temperatures, current velocities, and food source limitations which reduce the species local distribution. Habitat quality seems to vary with the availability of aerial and aquatic basking sites. Hatchlings (i.e. individuals through their first year of activity) require shallow water habitat with relatively dense submerging or short emergent vegetation in which to forage. This species also requires an upland oviposition site in the vicinity of the aquatic site. Suitable oviposition sites must have the proper thermal and hydric environment for incubation of the eggs. A map displaying extant and verified sightings of this species is found in the

1994 edition of the CDFA's "Amphibian and Reptile Species of Concern Within California" showed no indication of the Western Pond Turtle within the project area. If individuals of this species do occupy project sites, no impacts related to fuel treatments is anticipated given the protections afforded to aquatic, riparian and immediately adjacent upland basking sites by the provisions of Mitigation Measure #1.

Insects

Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*):² *Desmocerus californicus dimorphus* (VELB) is endemic to California and occurs below 2,900' in elevation. The VELB is completely dependent on its host plant, the elderberry which is a component of riparian forests throughout the Central Valley. Although this shrub occasionally occurs outside riparian areas, shrubs supporting the greatest beetle densities are located in areas where they are interspersed among dense riparian forest, including Fremont cottonwood (*Populus fremontii*), box elder (*Acer negundo*), California sycamore (*Platanus racemosa*), California walnut (*Juglans californica*), white alder (*Alnus rhombifolia*), willow (*Salix* spp.), button willow (*Cephalanthus occidentalis*), Oregon ash (*Fraxinus latifolia*), wild grape (*Vitis californica*), California hibiscus (*Hibiscus californica*), and poison oak (*Toxicodendron diversilobum*). Isolated elderberry shrubs separated from contiguous habitat are not typically considered to provide viable habitat for VELB. Potential VELB habitat is defined as stands of elderberry shrubs that are adjacent to, or contiguous with, riparian forest, floodplains, or relict elderberry savannah. Habitat occupied by VELB tends to form and exist in riparian corridors and on level open areas of periodically flooded river and stream terraces and floodplains. Adults are active from March to June, feeding and mating. Females lay their eggs on the bark. Larvae hatch and burrow into the stems. The larval stage may last 2 years, after which the larvae enter the pupal stage and transform into adults. Adults have been observed feeding on the leafy foliage of the elderberry plant. It appears that in order to serve as habitat, the shrubs must have stems that are 1.0 inch or greater in diameter at ground level. Through the implementation of Mitigation Measures #1, #2, and #3 any impacts to the Valley Elderberry Longhorn Beetle and its critical host the elderberry will be reduced to a less than significant level.

Crustaceans

No listed crustacean species were identified during the August 2011 CNDDDB database search.

Plants

(Includes those species having a State or Federal listings as well as those having a Rare Plant Rank, State Rank or Global Rank)

Ahart's Buckwheat (*Eriogonum umbellatum* var. *ahartii*): Ahart's Buckwheat has a Rare Plant Rank of 1B.2, a State Rank of S2, and a Global Rank of G5T2. This California endemic perennial herb occurs on serpentinite, slopes, and openings in chaparral and cismontane woodlands. Elevation range is from 1,312' to 6,561'. Blooming period is between June and September. Known occurrences of this plant have been found in Butte, Plumas, and Yuba Counties. It is anticipated that project work will open up stands of dense decadent chaparral allowing the germination and development of seed stocks as vegetative mulch created through crushing and mastication operations decompose into soil. Project work would occur during the months of August, September and the first two weeks of October prior to the October 15th wet weather closure required under the California Forest Practices Act. Impacts to this species will be reduced to a less than significant level through the implementation of Mitigation Measure #2.

Ahart's Dwarf Rush (*Juncus leiospermus* var. *ahartii*): Ahart's Dwarf Rush has a Rare Plant Rank of 1B.2, a State Rank of S1.2, and a Global Rank of G2T1. This California endemic annual herb occurs in valley and foothill grasslands (mesic). Elevation range is from 98' to 751' which well below the lowest elevation with the Forbestown Shaded Fuel Break project area. Blooming period is March through May. No impacts to this species are anticipated

AHART'S PARONYCHIA (*Paronychia ahartii*):^{1B.1} Ahart's paronychia is a California endemic annual herb species found in cismontane woodlands, valley and foothill grasslands, and vernal pool edges. The plant has a Rare Plant Rank of 1B.1, a State Rank of S2, and a Global Rank of G2. It occurs in cismontane woodlands, valley and foothill grasslands and vernal pools at elevations ranging between 98' to 1653' which is well below the lowest point within the Forbestown Shaded Fuel Break project area.

Big-Scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*): List 1B.2 Rare, Threatened, or Endangered in California and elsewhere. This plant is found within grassland, foothill woodlands and occurs in various land cover types, including purple needle grass grassland, serpentine bunchgrass grassland, mixed serpentine chaparral, mixed oak woodland and forest, ponderosa pine forest and woodland, between 150 feet and 4,500 feet in elevation within purple needle grass grassland, serpentine bunchgrass grassland, and mixed oak. Several sightings of this plant have been made east of the project area. No impacts to this species are anticipated with the implementation of Mitigation Measure #2.

Brandegee's Clarkia (*Clarkia biloba* ssp. *brandegeae*): Brandegee' Clarkia has a Rare Plant Rank of 1B.2, a State Rank of S3, and a Global Rank of G4G5T3. This California endemic annual herb often occurs in road cuts

within chaparral, cismontane woodlands, and lower montane coniferous forests. Elevation range is from 240' to 3002'. Blooming period is from May through July which is outside the operating period for the fuel break work.

BROWNISH BEAKED RUSH (*Rhynchospora capitellata*):^{2,2} This perennial herb grows in wet habitats such as swamps, springs, meadows and moist areas in forests at elevations between 705' to 3100'. Aquatic, riparian and streamside habitats will be protected by the provisions of Mitigation Measures #1.

BUTTE COUNTY FRITILLARY (*Fritillaria eastwoodiae*): This plant is currently a California Rare Plant Rank List 3 species. Evidence suggests that this is a local endemic with limited habitat occurrences. The plant's blooming period includes the months of March through May. Project work will involve removal of large chaparral and conifer material which will be processed through chipping or crushing. This material will be broadcasted back onto the site or worked into the soil where it will decompose. The presence of treated surface vegetation will reduce the impact of equipment operations in the area. In addition, project work will be completed after this plant's blooming period and prior to the date of wet weather closure as required under the California Forest Practices Act. Mitigation Measures #2 and #10 will also help reduce project related impacts to a less than significant level.

Cantelow's Lewisia (*Lewisia cantelovii*): Cantelow's Lewisia has a Rare Plant Rank of 1B.2, a State Rank of S3, and a Global Rank of G3. This California endemic perennial herb occurs in riparian areas and seeps located on mesic, granitic, and sometimes serpentinite soils. It is most often found within broadleafed upland forests, chaparral, cismontane woodlands, and lower montane coniferous forest landscapes. The plant's elevation range is from 1083' to 4495' and its blooming period is between May and October. This plant will be protected through the provision of Mitigation Measures #1 and #2.

Clifton's Eremogone (*Eremogone cliftonii*): Clifton's eremogone has a Rare Plant Rank of 1B.3, a State Rank of S2, and a Global Rank of G2. This California endemic perennial herb occurs in openings, usually granitic, in chaparral, lower montane coniferous forests and upper montane coniferous forests. Elevation range is from 1,493' to 5,807'. Blooming occurs from April through August which is outside the work period for this project. Vegetation treatments conducted through the execution of project work will open up both stands of dense suppressed Pine and Mixed conifer forests as well as openings containing dense tall old growth chaparral.

El Dorado County Mule Ears (*Wyethia reticulata*): El Dorado County Mule Ears has a Rare Plant Rank of 1B.2, a State Rank of S2, and a Global Rank of G2. This California endemic perennial herb occurs in clay or gabbroic soils, in chaparral, cismontane woodlands, and lower montane coniferous forests. Elevation range is from 607' – 2067' which is below the lowest elevation found within the project area. Blooming period is from April through August which is prior to the implementation of project work.

Felt-Leaved Violet (*Viola tomentosa*): Felt-Leaved Violet has a Rare Plant Rank of 4.2, a State Rank of S3.2, and a Global Rank of G3. This California endemic perennial herb occurs in gravelly areas, lower montane coniferous forests, upper montane coniferous forests, and subalpine coniferous forests. The plants blooming period is between May and October. Its elevation range is between 4,708' and 6,500' which is far above the highest elevation within the Forbestown Fuel Break project area.

Henderson's bent grass (*Agrostis hendersonii*)^{3,2} Henderson's Bent Grass has a Rare plant rank of 3.2, a State Rank of S1.1 and a Global Rank of G1Q. This annual herb is not endemic to California. *Agrostis* spp. are mostly annual or perennial grasses and are found in the vernal pools of Central Valley grasslands, between 230' and 1000'; usually below 980 feet in elevation which is outside the elevation range of the Forbestown Shaded Fuel Break project area. There are no vernal pools within the project area consequently no impacts to this species are anticipated.

Jepson's Onion (*Allium jepsonii*): Jepson's Onion has a Rare Plant Rank of 1B.2, a State Rank of S1.2, and a Global Rank of G1. This California endemic, perennial bulbiferous herb occurs in serpentinite or volcanic areas, in chaparral, cismontane woodlands, and lower montane coniferous forests. The plants elevation range is from 984' to 4331'. Its blooming period is from April through August which is outside the operational period of this project.

Layne's Ragwort (*Packera layneae*):² Layne's Ragwort is a federally listed Threatened plant and has a Rare Plant Rank of 1B.2, a State Rank of S2, and a Global Rank of G2. This California endemic, perennial herb occurs in serpentinite or gabbroic, rocky areas, in chaparral and cismontane woodlands. Elevation range is from 656' to 3,281'. Its blooming period is between April and August which is outside the operational period of this project.

Lewis Rose's Ragwort (*Packera eurycephala* var. *lewisrosei*): Lewis Rose's Ragwort has a Rare Plant Rank of 1B.2, a State Rank of S2.2, and a Global Rank of G4T2. This California endemic, perennial herb, occurs in serpentinite areas, in chaparral, cismontane woodlands, and lower montane coniferous forests. Elevation range is from 899' to 6,201'. Blooming period is from March through August which is outside the operational period of this project.

Mildred's Clarkia (*Clarkia mildredia* ssp. *mildrediae*): Mildred's Clarkia has a Rare Plant Rank of 1B.3, a State Rank of S3, and a Global Rank of G3T3. This California endemic, annual herb occurs in serpentinite sandy, usually granitic areas, in cismontane woodlands and lower montane coniferous forests. Elevation range is from 804' to 5,610'. Blooming period is from May through August which is outside the operational period of this project. No sightings of this plant have been noted within the project area.

Minute Pocket Moss (*Fissidens pauperculus*): Minute Pocket Moss has a Rare Plant Rank of 1B.2, a State Rank of S1, and a Global Rank of G1T2. This moss is not endemic to California. It occurs in damp soils, most often in North Coast coniferous forests. The plants elevation range is from between 33' and 3,360'. Known occurrences

have been found in the canyon of the Feather Rivers Middle Fork. The project area contains largely dry sites. The only damp areas are in riparian zones which will be protected through the “No Treatment Zones” described in Mitigation Measure #1.

Mosquin’s Clarkia (*Clarkia mosquinii*): Mosquin’s Clarkia has a Rare Plant Rank of 1B.1, a State Rank of S2, and a Global Rank of G2. This California endemic annual herb occurs in rocky areas and roadsides, in cismontane woodlands and lower montane coniferous forests. The plant’s elevation range is from 600’ to 4,000’ and its blooming period is from late June through August. This project is not expected to impact the species as all project work will occur outside the plant’s blooming period and will only treat understory brush and tree species not those plants found at the soil surface. Brush crushing and mastication will create mulch that both protects the soil surface from equipment impacts and helps to retain soil moisture prior to decomposition. In addition by opening up stands of dense conifers and chaparral, more sunlight can reach the soil surface, allowing this species to grow and develop. The botanical qualification requirements of personnel working on the Forbestown Shaded Fuel Break described in Mitigation Measure #2 will assure that if this sensitive plant is located within the project area, it will be identified and protected from treatment impacts.

Obtuse starwort (*Stellaria obtusa*):^{4.3} This perennial rhizomatous herb is found on mesic sites and along shaded edges of creeks or on talus slopes within Lower montane coniferous forests, Upper mountain coniferous forests and Riparian woodlands at elevations ranging between 4,920’ and 7,000’ feet. It grows in a prostrate manner and the plant’s blooming period is between May and early September. *Stellaria obtusa* is not expected to be impacted by project work as wide riparian and wet area “No Treatment Zones” will be established prior to the implementation of project work and there are no talus slopes within the project area. Impacts to this species will be reduced to a less than significant level through the implementation of Mitigation Measures #1 and #2.

Quincy lupine (*Lupinus dalesiae*):^{4.2} Quincy lupine is a perennial herb that is found in natural openings within chaparral, Cismontane woodland, Lower montane coniferous forests and Upper montane coniferous forest at elevations ranging between 2,800’ and 8,200’. The plant blooms between May and August. *Lupinus dalesiae* is threatened by logging, roadside maintenance, and overshadowing. It is anticipated that impacts to this species will be minimal due to Mitigation Measure #2. Project work is expected to improve habitat and growing conditions for the Quincy lupine as dense mixed conifer stands that currently provide excessive ground shading will be opened up. In addition, dense stands of chaparral shrubs in open areas where this species thrives will be reduced allowing more sunlight to reach seed stocks in the soil along with additional moisture and growing space.

Sanford’s Arrowhead (*Sagittaria sanfordii*):^{1B.2} This emerged aquatic perennial rhizomatous herb occurs in shallow, standing, fresh water and sluggish waterways within marshes, swamps, ponds, vernal pools and lakes, reservoirs, sloughs, ditches, canals, streams and rivers at elevations from 0 to 2,000’ feet which is somewhat below the

lowest elevation within the project area. *Sagittaria sanfordii* flowers from late May to August. At the present time, it is threatened by grazing, development, recreational activities, non-native plants, road widening, and channel alteration. Suitable habitat within the project area includes several intermittent streams along with irrigation ditches. Although the project area is out of the normal elevation range of the Sanford's Arrowhead if outlying individuals do exist within the project area, they would be protected through the implementation of Mitigation Measures #1 and #2 which includes protection to special status riparian and aquatic species in man made water conveyance structures. Consequently impacts to this plant would be less than significant.

Sierra Blue Grass (*Poa sierrae*):^{1B3} This perennial rhizomatous herb is found within Lower Mountain coniferous forests at elevations ranging from 1,190' to 4,920'. The species' blooming period is between April and June. *Poa sierrae* requires some direct sunlight along with deep well drained soil. Although habitat suitable for Sierra Blue Grass is found within the project area, dense stands of chaparral and thickets of small mixed conifer species prevent the development and expansion of this grass. Impacts to sites suitable for *Poa sierrae* will be minimal considering that all treatments will occur at the soil surface or a few inches beneath it. In addition, crushed material will be incorporated into the top 2 to 3 inches of the soil surface where it will decompose. With surface and ladder fuels reduced and once decomposition has begun, more sunlight will reach the soil surface allowing the germination and development of Sierra Blue Grass seed already in the soil. In addition, the current or masticated debris will act as mulch that will help retain soil moisture.

Tracy's sanicle (*Sanicula tracyi*):^{4.2} Tracy's sanicle is a perennial herb which blooms between April and June. It is found within Cismontane woodlands, Lower montane coniferous forests as well as Upper montane conifer forests. Its elevation range is between 328' and 5,200'. It is most often found in openings located within coniferous forests and woodlands. In addition to minimal impacts occurring to this species attributable to Forbestown Shaded Fuel Break project work, it is anticipated that habitat for this species will improve. Currently the project area is covered by either thickets of small sometimes suppressed mixed conifer species or openings containing dense stands of chaparral bush. In both instances, fuel manipulation will result in increased sunlight reaching the soil surface allowing this plant to germinate and develop and the mulch created by mastication and brush crushing will help retain soil moisture.

White-Stemmed Clarkia (*Clarkia Gracilis ssp. albicaulis*): This annual plant has a CNPS rating of 1B.2 and grows abundantly in open woodlands and grassy meadows that have been created by wildfire. It is anticipated that removing a significant portion of the large woody chaparral vegetation within the project area will increase the percentage of open sites and the likelihood of this species becoming established within the project area.

Non-Plant Speices Identified in the CNDDDB Search That Have Other Than Federal Or State Listing

Fringed Myotis (*Myotis thysanodes*): Although not a Federal or State listed species, the fringed myotis appeared on a recent search of the CNDDDB. This species is widespread in California. It occurs in a wide variety of habitats from sea level to 9,350'. Optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer, generally at elevations ranging between 4,000' and 7,000'. *Myotis thysanodes* feeds primarily on beetles, moths, arachnids, and orthopterans. This species roosts in caves, mines, buildings, or crevices and separate day and night roosts may be used. Maternity colonies of up to 200 individuals are located in sites similar to those used for roosting. Adult males are absent from maternity colonies, which are occupied from late April through September. Maternity group members may remain together during hibernation. The period of hibernation lasts from October through March.

This species is migratory, making relatively short, local movements to suitable hibernacula. Mating occurs in the fall, followed by delayed fertilization. Gestation lasts 50-60 days. The young are born from May through July, but most are born in late June. The fringed myotis is easily disturbed at roosting sites. If this species were present within the project's impact area, it would only be disturbed for a short period of time and during daylight hours. Project work is anticipated to be completed rapidly. If the species was disturbed, it would only be for day or two. After that, noise and activity levels within a particular portion of the project would return to pre project levels. Although there are rocky areas within the general area, no rocky outcrops suitable for roosting exist on site. In addition, no impacts will occur to any caves, mines or built structures which could serve as roosting sites. Consequently even if this species were present within the project area no significant impacts to individuals or habitat are anticipated.

Hoary Bat (*Lasiurus cinereus*): The hoary bat has no Federal, State, or DFG ranking but is listed on the CNDDDB. It is the most widespread North American bat and may be found at any location in California. This common, solitary species winters along the coast and in southern California, breeding inland and north of the winter range. During migration, it may be found at locations far from the normal range. Habitats suitable for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. Hoary bats have been recorded from sea level to over 13,200'. Impacts to this species are not anticipated as much of the project area's forest stands contain smaller, second and third growth trees.

Yuma Myotis (*Myotis yumanensis*): The Yuma Myotis has no Federal, State, or DFG ranking but is listed in the CNDDDB and is common and widespread in California. It is found in a wide variety of habitats ranging from sea level to 11,000 ft, but it is uncommon to rare above 8000 ft. Optimal habitats are open forests and woodlands with sources of water over which to feed including ponds, streams, and stock tanks. The Yuma myotis roosts in buildings, mines, caves, or crevices, and also has been seen roosting in abandoned swallow nests and under bridges. Maternity colonies of several thousand females and young may be found in buildings, caves, mines, and under bridges. Warm, dark sites

are preferred. If temperatures exceed 40°C, bats seek cooler locations, and individuals roost farther apart. Yuma Myotis is nocturnal and hibernates. It makes local or short migrations to suitable hibernacula. This species emerges soon after sunset with peak activity occurring one to two and half hours after sunset. The Yuma myotis, like other California bats, mates in the fall. The season of births lasts from late May to mid-June with a peak in early June. It is likely that some young are born in July. If this species is present within the project area, impacts to individuals and habitat will be minimal. Not only are the majority of woodlands within the project area suppressed conifer stands, there will be no impacts to built structures, mines or caves which this species uses for roost sites.

a) *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 the California Department of Fish and Game or the U.S. Fish and Wildlife Service?*

A review was made of the California Natural Diversity Database, the Cal Fish Database, the Wildlife Habitat Relationships System of the California Department of Fish and Game along with other sources of information in order to determine the occurrence of Candidate, Sensitive or Special Status Species within or immediately adjacent to Phase 3 and Phase 5 of the Forbestown Shaded Fuel Break project areas. Those with the highest probability of occurring within the project area inhabit riparian sites and wet environments as are found along stream courses. Impacts to these areas would be reduced to a less than significant level through the implementation of Mitigation Measures #1 through #4.

b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?*

No formally designated riparian habitats or sensitive natural communities have been established within the project area. In addition, Mitigation Measures #1 through #5 will be implemented during the execution of project work in order to reduce potential impacts on biological communities to a less than significant level.

c) *Would the project 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?*

Project work will not entail incidental earth movement and there are no federally protected wetlands located within the project area. In addition, all wet areas will be protected through the implementation of Mitigation Measure #1.

d) *Would the project 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?*

No impacts to migratory terrestrial, aquatic or avian species will occur that are attributable to the execution of this project. Mitigation Measures #1 and #2 are incorporated into project implementation in order to reduce potential impacts to aquatic or riparian species to a less than significant level. Mitigation Measure #4 will reduce potential impacts to insects, avian species as well as upland sites or related species to a less than significant level.

- e) ***Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

There are no local policies or ordinances protecting biological resources that affect the project area

- f) ***Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?***

There are no formally approved, adopted or recognized habitat conservation or natural community plans that affect the project area.

Measures to Reduce Impacts to Biological Resources

Mitigation Measure #1: All wet and dry stream courses will be protected by a 75' or to break in slope "No Treatment Zone" unless the slope within the inner riparian zone and core riparian zone have slopes of greater than 50%. In such instances all wet and dry stream courses will be protected by a 100' or to break in slope "No Treatment Zone". Ditches, canals and other man made water conveyance structures will be protected by a 25' "No Treatment Zone". All buffers will be established on both sides of stream channels and flow structures. All springs will be encircled by a 75' "No Treatment Zone". "No Treatment Zones" will be established and flagged as directed by the Project Manager prior to the implementation of any project work. Monitoring photographs will be taken by the Project Manager before and after completion of project work in order to document compliance with Mitigation Measure #1 and these will be incorporated into the project file.

Mitigation Measure #2: Personnel specifically trained in the identification of List 1, List 2 and List 3 species or a professional botanist will be required to evaluate potential habitat for these species prior to implementation of work within the project area during the appropriate blooming or identification period. Such personnel will also evaluate potential findings of any such plants within treatment areas during the execution of project work. If any Federal or State listed threatened or endangered species are detected in the project area that may be impacted by the project work, then all project related activities will immediately stop within that area which will be flagged with a 25' "No Treatment Zone". All sightings will be documented using the California Natural Diversity Data Base (CNDDDB) field survey form a copy of which will be submitted to the CNDDDB and the USFWS. A copy will also be incorporated into the project files. Qualifications for personnel who will make evaluations of sites include those found in the California Department of Fish and Game's 2009 document entitled "**Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities**"(Attached).

Mitigation Measure #3: USFWS 1999 guidelines will be followed if valley elderberry is encountered outside the "No Treatment Zone" described in Mitigation Measure #1 during the implementation of project work.

Mitigation Measure #4: In order to protect any species covered by the Migratory Bird Treaty Act (MBTA), no fuels treatment work will occur between March to August, unless the following is implemented: 1. A survey is conducted by a biologist or a person with knowledge of, and ability to recognize, species protected by the MBTA and it is determined that there are no occupied nests within the proposed activity area. 2. If an occupied nest is found, then a biologist or a person with knowledge of, and ability to recognize, species protected by the MBTA will determine if the birds present are those protected by the MBTA. 3. If an MBTA species is located then no activities will occur within 100 feet of the nest during the breeding season.

Mitigation Measure #5: In order to prevent the spread of invasive plant species all heavy equipment to be used in the execution of project work will be cleaned off site prior to use within the project area. The Project Manager will assure and document equipment cleaning. Documentation of cleaning will be incorporated into the project file.

No significant adverse impacts to Biological Resources are anticipated with the implementation of the above Mitigation Measures.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Will the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

Information about Cultural Resources

In order to assess possible impacts to cultural resources attributable to the Forbestown Shaded Fuel Break project, an archeological records search was made for the project area by the Northeast Center of the California Historical Resource Information Center (NCCHRIC) at California State University Chico. The date of that records search was September 27, 2011. In addition, Native American consultation identification letters were submitted to the following groups:

- Native American Heritage Commission**
- Berry Creek Rancheria of Maidu Indians**
- Mechoopda Indian Tribe of Chico Rancheria**
- Butte Tribal Council**
- Mooretown Rancheria of Maidu Indians**
- KonKow Valley Band of Maidu**
- Tsi-Akim Maidu**

A letter was received from the Mechoopda Indian Tribe of the Chico Rancheria dated October 6, 2011 indicating that the organization was unaware of any archeological sites or other cultural resources within the project area and it was requested that they be contacted if such sites were found. In addition, a standard cultural resource inventory under Section 106 of the National Historic Preservation Act (36 CFR 800) was completed on October 7th and 8th 2011 for the project area and no significant archeological resources were identified. No known unique archeological, cultural or paleontological resources are known to exist within the project area and no new resources were found during the survey. No known human remains have been reported for that area and none were found during survey activities.

Standard consultation under Section 106 of the National Historic Preservation Act (36 CFR 800) will be completed prior to any project work. If any cultural sites are found during project implementation, they will be flagged in order to restrict equipment access. In the event that previously unidentified archaeological resources are discovered during project implementation, all work will stop and consultation with the state historic preservation office will be reinitiated. The following Mitigation Measures have been developed in the event that unknown cultural, archeological or paleontological resources are found during the implementation of project work:

Measures to Reduce Impacts to Cultural Resources

Mitigation Measure #6: An individual knowledgeable in identifying cultural resources will be on site prior to all ground disturbing activities in order to assure that all archeological, prehistoric, historic or paleontological resource sites along the path of the fuel break or within 30 feet beyond the project boundary have been flagged and that equipment operators and others working in the project areas are informed about their locations. Such individuals may be an RPF with Cal Fire archeological certification, a professional archeologist or other individuals with appropriate training as determined by a professional archeologist.

Mitigation Measure #7: Within areas of ground or vegetation disturbing activities, if project work appears to expose any previously unknown archeological, prehistoric, historic or paleontological resource sites along the path of the Fuel break or within 30 feet beyond the project boundary, the site will be avoided. Work may continue elsewhere within the overall project area. Exposed cultural or paleontological resources will be appropriately flagged in order to immediately establish an exclusion buffer of at least 100 feet. A professional archeologist will examine the site, evaluate found objects and make a finding of their significance. The archeologist will also develop recommendations for the permanent protection of objects and site treatments as necessary. Identified sites will be permanently protected through avoidance. These sites will be made off limits to both personnel and equipment. A professional archeologist will determine an appropriate permanent flagged exclusion zone once the site has been adequately assessed for significance. Findings of significance will be prepared and submitted to appropriate agencies as well as appropriate Native American groups at the discretion of the professional archeologist. As appropriate, findings will be recorded in the project files.

Mitigation Measure #8: If during the execution of project work human remains are found, the Project Manager will halt work at that location until a professional archaeologist visits the site in order to assess their significance and process the remains and the County coroner will be immediately notified. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC) and Native American groups at the discretion of the professional archeologist will be notified within 24 hours and the guidelines of the NAHC will be adhered to in the treatment and disposition of the remains.

Findings of significance will be prepared and submitted to appropriate agencies at the discretion of the professional archeologist. Findings will also be recorded in the project files by the Project Manager. Project work may continue on other non-impacted portions of the project area

Impacts related to Cultural Resources will be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Soil types present within the project area include loams and gravelly loams that are well drained and have low erosion potential. Project work will be conducted on sites with slopes of less than 50%. The area has significant crown closure which will be reduced due to mastication operations. In addition, brush fields will be treated thought mastication along with brush pushing and crushing. Both treatment techniques will result in significant amounts of processed woody material remaining on the soil surface within the project’s impact area. No burning will be conducted in connection with this project. As a result of the significant protective cover generated in connection with project work, the area’s winter rainfall amounts will be absorbed, preventing erosion on steeper slopes.

a) ***Would the project 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 California Geological Survey Special Publication 42.)***

A review of the current Alquist-Priolo Earthquake Fault Zone Maps indicates that there are a number of faults located approximately 6 miles southwest of the project area. Map information reports that the latest occurrence

of seismic activity was in 1975 and 1976. No indication of rupturing is indicated within the Forbestown Shaded Fuel Break Project area.

ii) Strong seismic ground shaking?

See comments under VI. a) i) above

iii) Seismic-related ground failure, including liquefaction?

See comments under VI. a) i) above

iv) Landslides?

Given the well drained soil types found within the project area, work scope prohibitions regarding fuel treatments on slopes greater than 50% and the large amount of live and processed vegetation that will remain on site after project work is completed, the likelihood of landslides during extended periods of wet weather is minimal. As an abundance of caution, Mitigation Measures #9 through #12 shown below will be implemented during the execution of project work.

b) Would the project result in substantial soil erosion or the loss of topsoil?

As mentioned in the above discussion, soil types within the project area include loams and gravelly loams that are well drained and have low erosion potential. In addition, project work will be conducted on slopes of less than 50% and will entail the removal of some standing vegetation that will be either masticated or crushed and left on the soil surface as a protective mulch. In order to further reduce the possibility of top soil loss to a less than significant level, Mitigation Measures #9 through #12 will be implemented during and after the execution of project work.

c) Would the project 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?

The well drained soils within the project area are not generally subject to landslide, lateral spreading, subsidence, liquefaction, or collapse. Through the execution of project work a considerable amount of processed woody vegetative material will be produced and broadcast back onto the soil surface creating protective mulch and all treatments will be performed on sites with slopes of less than 50%. In order to reduce the potential for soil movement, liquefaction or collapse, Mitigation Measures #9 through #12 will be implemented during and after the execution of project work.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?

There are no expansive soils as defined in Table 18-1-B of the Uniform Building Code within the project area. In addition project work does not entail the construction of buildings that could be at risk from expansive soils.

e) Would the project 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?

The project area is not zone for urban development uses. No septic tanks or alternative waste water disposal systems are located within the project's immediate impact area and none will be developed in connection with the completion of this fuel break.

Measures to Reduce Impacts to Geology and Soils

Mitigation Measure #9: No equipment operations will occur on slopes exceeding 50 percent and will not occur on any unstable areas, regardless of slope percentage. Slope and suitability for equipment operations will be determined by a Registered Professional Forester (RPF) or the Project Manager.

Mitigation Measure #10: During the implementation of project work, dozer blades will be maintained at least 2 to 3 inches above ground throughout the project area. Periodic inspection of blade height will be made by the Project Manager during the execution of project work in order to insure dozer operator adherence

Mitigation Measure #11: Waterbars will be installed on slopes of 30% or greater where 500 sq. ft. or more of soil has been exposed by project activities. Waterbars are to be installed where vegetation treatments lead into or have access to a watercourse. An adequate number of waterbars as determined by an RPF, other suitably trained personnel, or the Project Manager will be installed per the provisions of California Forest Practices Act 934.6 in order to prevent the degradation of water quality. Waterbar installation will be inspected by the Project Manager during subsequent precipitation events throughout the following winter season in order to assure their adequacy. Condition and operation of waterbars will be recorded in the project files.

Mitigation Measure #12: Any newly-exposed soil of over 100 square feet in area will be mulched with brush to minimize the potential for erosion. Hand water bars will be installed to divert water onto stable vegetation and away from watercourses, as needed. Verification of proper installation and sufficiency of both mulching and waterbars will be made by the Project Manager prior to and following the season's first precipitation event and recorded in the project file.

No significant adverse impacts related to Geology and Soils are anticipated with the implementation of the above Mitigation Measures.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

Section 15064.4 of the CEQA Guidelines sets forth guidance for determining the significance of impacts from greenhouse gas emissions. The guidelines allow impacts from a particular project to be described quantitatively or qualitatively and direct that impacts should be evaluated in consideration of the existing environmental setting, applicable thresholds of significance, and compliance with regulations and requirements adopted to implement the mitigation of greenhouse gas emissions. Section 15064 (h)(3) of the CEQA Guidelines specifies that a project’s contribution to a cumulative effect may be found ‘not cumulatively considerable’ if the project will comply with the requirements in a previously approved plan or mitigation program, including plans or regulations for the reduction of greenhouse gas emissions. Butte County has not adopted a plan or mitigation program for the reduction of greenhouse gases as of the publication of this study. Likewise, it has not adopted thresholds of significance for evaluating greenhouse gas emissions. This section evaluates greenhouse gas emissions relative to the existing environmental setting and compliance with air quality regulations relative to heavy equipment (bulldozer and masticator) use emissions, the primary contributor to greenhouse gas emissions from the proposed project.

The heavy equipment to be used in connection with this project’s work scope will be operated for a relatively short duration and would contribute a negligible amount to overall greenhouse gas emissions. As discussed in the Air Quality section of this Initial Study/Mitigated Negative Declaration, the standard air protection requirements for fuel break projects established by the Butte County Air Quality Management District have been incorporated into this project’s work scope. As a result, impacts related to greenhouse gas emissions will be less than significant. Additional air quality analysis is recommended when projects approach Butte County Air Quality Management District Level B action levels, which have the potential to generate 25 lbs per day of Reactive Organic Gases. This however is not anticipated in connection with the execution of the Forbestown Shaded Fuel Break project.

Finally, this fuels management project calls for the crushing and incorporation of wild land fuels into the soil rather than large scale burning of vegetative material which would result in the release of significant amounts of smoke and greenhouse gases. In addition, it is anticipated that with a reduction in the volume of competing vegetation, growth rates of

the areas pine and mixed conifer forests will increase. As a result, it is anticipated that the limited amount of greenhouse gas emissions generated through the development of this fuel break will be sequestered along with those generated offsite by area traffic and other activities. Based upon a negligible contribution to overall emissions, consistency with adopted air quality regulations for vehicle emissions and the positive impacts the reduction of wild land fuels will have on forest sequestration of greenhouse gas emissions, it is anticipated that this project will have a less than significant impact on greenhouse gas emissions.

ISRG Action Level Thresholds (1997)						
Unit of Measure	Level B (lbs. per day)			Level C (lbs. per day)		
	ROG (25)	NOX (25)	PM10 (80)	ROG (137)	NOX (137)	PM10 (137)
DU	97 DU	119 DU	4,000 DU	534 DU	652 DU	6,850 DU

- a) ***Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***
 (See comments above)
- b) ***Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gas?***
 (See comments above)

Impacts related to greenhouse gas emissions will be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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, will it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

Project work entails mastication of small trees (10" and under and oaks 6"DBH and under) and brush largely on the down hill side of Forbestown Road, Lower Forbestown Road, Black Bart Road and a number of lightly used wildland roads. The only hazardous materials that will be used in connection with project work will be diesel fuel and lubricants for masticators, dozer and transportation vehicles. A small amount of gasoline will be used to fuel chainsaws or other hand tools. There is a chance that a spill could occur if equipment overturned or during equipment fueling and maintenance operations. This is unlikely however, and the risk would not be significant with the implementation of Mitigation Measure #1 and #13. Forbestown Road, Lower Forbestown Road and Black Bart Road are all rated for truck traffic as are the minor unpaved wildland roads to be used for access to project areas. The impacts of possible fuel and lubricant spillage will be minimized by conducting such operations along flat portions of roadways. Fuel containment equipment (absorbent sheets and waddles) will be located at all refueling and maintenance sites.

- a) ***Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?***

Project work poses a minor potential hazard related to the transport and use of fuel and lubricants. The risks related to this hazard will be reduced to a less than significant level through the implementation of Mitigation Measures #13 and #14. In addition Mitigation Measure #1 related to the establishment of “No Treatment Zones” along riparian areas will provide additional protection to streamside habitats and water quality.

- b) ***Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?***

See comments under VII. a) above.

- c) ***Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***

There are no existing or proposed schools within one-quarter mile of the project area.

- d) ***Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?***

The project area is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5.

- 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?***

The project area does not lie within an airport land use plan or within two miles of a public airport or public use airport.

- 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?***

There are no private air strips within or immediately adjacent to the project area.

- g) ***Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

Project work will not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. It is anticipated that the reduction in roadside vegetation will improve emergency response and evacuation by increasing roadway sight distances and opening up dense stands of timber and brush which currently obscures the view of houses and other structures from emergency response personnel. In addition the fuel breaks will better insure that Forbestown Road, Lower Forbestown Road and Bart Road will be available for evacuation travel in the event of wildfire within the project area.

h) *Would the project 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?*

The execution of project work has the potential to ignite a fire within a wildland area. The risk to people and structures will be reduced as project work will be conducted when fuel moisture and humidity are at adequate levels as determined by Cal Fire or other local fire fighting authorities. In addition, fire fighting equipment, fire extinguishers and portable fire water will be made available at work sites as established by Mitigation Measure #15. Finally, through completion of the Forbestown Shaded Fuel Break project, the risk of loss injury or death attributable to catastrophic wildfire will be reduced through the removal of excess vegetative fuels.

Measures to Reduce Impacts Related to Hazards and Hazardous Materials

Mitigation Measure #13: The Project Manager will select refueling and maintenance areas for heavy equipment, chainsaws and other combustion powered hand tools on flat sites that are away from dry or wet waterways as well as areas that could potentially flow into a stream in the event of an accidental spill. Fuel containment equipment (i.e., absorbent sheets and waddles) will be made available and used at refueling and maintenance areas. Fuel spillage will be minimized by conducting these operations in flat areas. Equipment will be stored and maintained within properly cleared areas. The Project Manager will inspect refueling areas to assure compliance with this Mitigation Measure. These inspections will also verify the sites' adequacy in protecting riparian and terrestrial resources as well as the use and availability of containment equipment.

Mitigation Measure #14: Contractors or landowners providing operations equipment (dozers, etc.) will make daily inspection of equipment for leaks, correcting and repairing any such leaks prior to resuming their use. The inspection reports will be submitted to the Project Manager along with evidence of any repairs required and completed before returning equipment to project work sites. Inspection reports will be incorporated into the project files. In the event that equipment will need to cross live streams, a California Department of Fish and Game Stream Alteration Agreement may be required at the discretion of that agency.

Mitigation Measure #15: Contractors or landowners providing equipment will provide adequate fire protection equipment. This will include a water wagon located at equipment operation areas as well as fire extinguishers attached to all mechanized equipment. In addition, fire fighting hand tools will be made available at all areas where equipment is operated.

No significant adverse impacts related to hazards and hazardous materials are anticipated with the implementation of the above Mitigation Measures.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will 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 will drop to a level that will not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 will result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

Fuel treatments will be conducted along the downhill side of Forbestown Road, Lower Forbestown Road, Black Bart Road and number of minor unpaved wildland roads. Through the implementation of Mitigation Measure #1, water quality within streams and other aquatic habitats found within the Phase 3 and Phase 5 of the project area will be protected.

a) *Would the project violate any water quality standards or waste discharge requirements?*

Project work poses a potential for impacts to water quality standards related to soil sediments as well as the release of diesel fuel and equipment lubricants. This potential will be reduced to a less than significant level through the implementation of Mitigation Measures #1, #9, #10, #11, #12, #13, #14 and #15.

- b) ***Would the project 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 that would not support existing land uses or planned uses for which permits have been granted)?***

The only surface water that would be used in connection with project work would be for fire suppression in the event of an ignition. As a result, no impacts to groundwater supplies or groundwater recharge are anticipated.

- c) ***Would the project 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 on- or off-site erosion or siltation?***

All project work will be completed outside of the “No Treatment Zones” established for wet and dry stream channels or other natural and man made aquatic environments as described in Migration Measure #1. In addition, none of the activities of this project’s work scope relate to altering drainage patterns.

- d) ***Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?***

Project work will entail the removal of small trees and brush species. No portion of the project’s work scope entails the alteration of a stream or river.

- e) ***Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?***

The project area is within a wildland area where only individual rural residential units are found and there are no manmade storm water drainage systems in place.

- f) ***Would the project otherwise substantially degrade water quality?***

The Mitigation Measures mentioned under IX.a) above will reduce potential overall water quality impacts to a less than significant level.

- g) ***Would the project 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?***

There will be no housing constructed in connection with project work.

- h) ***Would the project place within a 100-year flood hazard area structures that would impede or redirect flood flows?***

No structures will be developed that would impede or redirect flood flows.

- i) ***Would the project 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?***

No levees or dams will be constructed in connection with this project.

- j) ***Would the project result in inundation by seiche, tsunami, or mudflow?***

There is no potential for seiches or tsunamis within the project area.

Measures to Reduce Impacts to Hydrology and Water Quality

Mitigation Measure# 16: Any existing drainage features will be protected from project related impacts and will remain free of obstruction.

No significant adverse impacts related to hydrology and water quality are anticipated with the implementation of the above Mitigation Measure.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Land Use and Planning. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) ***Would the project physically divide an established community?***
 The overall project area is within a portion of southeastern Butte County (including Phase 3 and Phase 5) and northeastern Yuba County containing individual rural residential and agricultural structures. The nearest community is Forbestown. No established communities will be physically divided by any of the Phases of the Forbestown Shaded Fuel Break project. In addition the fuel treatments that have been planned or completed in connection with all phases of the Forbestown Shaded Fuel Break will improve access and egress of community members and fire fighting personnel in the event of an emergency. Project work will also generally improve travel safety along these roads. As a result, it is anticipated that the major roads in the Forbestown area will be better able to connect residents within this scattered rural community.
- b) ***Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?***
 Both the Butte County and Yuba County general plans designate land use within the overall Forbestown Shaded Fuel Break project area for timber production, wildlife management and rural residential development. This project does not conflict with any Federal, State, or County land use plan.
- c) ***Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?***
 No habitat conservation plans or natural community plans have been formally established for the lands within the project area.

No impacts to land use and planning are anticipated.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) ***Would the project 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?***
 The Forbestown Shaded Fuel Break project entails the reduction of forest and chaparral vegetation and will not result in any loss of mineral resources.
- b) ***Would the project 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?***
 Project work will not result in the loss of any locally important mineral resource recovery site.

No impacts to mineral resources are anticipated.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. 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 in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, will the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) ***Would the project create exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?***

During the development of this project’s fuel breaks, a temporary increase in ambient noise level will be created by mastication equipment, dozers, chainsaws and other equipment. This will be minimal and created only during daylight hours. Work is anticipated to progress at a rapid rate and as a consequence noise generating equipment will be within a particular location for a limited period of time resulting in very short term impacts to residents or wildlife behavior. No long term impacts to noise standards established in either the Butte County or Yuba County General Plans are anticipated.

b) ***Would the project create exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?***

All project work will be completed using mastication equipment, dozers and chainsaws. There are occupied rural residential dwellings within the general project area where mechanized equipment will be used however equipment will operate around these structures for only a short period of time. Consequently impacts related to ground borne vibration or noise levels will be less than significant.

c) ***Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?***

Increases in noise levels related to project work will be minor and temporary. Once project work is complete, ambient noise levels will return to their pre-project levels.

d) ***Would the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?***

Within that portion of the project area immediately adjacent to mastication, dozer and chainsaw operations, ambient noise levels will be increased above existing levels but only for a very short period of time (one day or two days). Once project work has been completed, ambient noise levels will return to their pre-project levels. Impacts to temporary ambient noise levels will be less than significant.

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?***

There are no public airports within the project area and no noise impacts related to airport operations are anticipated.

f) ***For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?***

There are no private airstrips within or adjacent to any of the project impact sites or the overall project area.

Impacts related to noise will be less than significant.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a) *Would the project 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)?*

This project will not entail the development of any structures or activities that would induce population growth. No impacts related to population growth are anticipated.

b) *Would the project displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?*

Although there are homes within the project area, there will be no displacement of homes attributable to the Forbestown Fuel Break which would necessitate the construction of replacement housing elsewhere. No impacts related to displacement of homes are anticipated.

c) *Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

There will be no displacement of local residents related to the implementation of this project.

No impacts to population and housing are anticipated.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) ***Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:***

This overall project area is located in a rural portion of Butte County and Yuba County where there are few public services. The fuel breaks created by the implementation of this project will reduce the potential for very large catastrophic wildfires that threaten residents as well as watershed resources. As a result, there will be beneficial impacts to fire protection services used by communities near the project area. No negative impacts to the provision of Fire Protection, Police Protection, Schools, Parks or other public facilities will occur.

Fire protection?

Police protection?

Schools?

Parks?

Other Public Facilities?

No impacts to public services are anticipated.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Recreation. Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- 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?***
 No increase in the use of parks or other recreational facilities will result from the execution of project work.
- b) ***Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?***
 No recreational facilities will be construction or expanded as a result of project work.

No impacts to recreation are anticipated.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Project work will be conducted largely along various segments of Forbestown Road, Lower Forbestown Road, and Black Bart Road which are main rural routes within southeastern Butte County and northeastern Yuba County. A portion of project work will also occur along a number of unpaved wildland roads. Phase 3 and Phase 5 project work will be completed off the paved or graded surface of all roadways however equipment may on occasion enter the road right-of-way which would require an encroachment permit from the Butte County Public Works Department. Heavy equipment will disembark off of paved or graded portions of roads and these operations will be conducted under applicable State and County traffic control regulations.

- a) ***Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?***
 Project work will not result in an increase of traffic.

- b) ***Would the project exceed, individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?***
 Project work will not result in an exceedence of any level of service standard for roads and highways.

- c) ***Would the project 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?***

No impacts to air traffic patterns will result from the execution and completion of project work.

- d) ***Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

This project does not affect the design of any roads. Visibility along roadways within the project's impact area will be improved through the thinning of roadside vegetation.

- e) ***Would the project result in inadequate emergency access?***

No negative impacts to emergency access will occur. It is anticipated that access for rapidly moving emergency vehicles will be improved through the removal of dense vegetation that will result in increased site distances along local roads.

- f) ***Would the project result in inadequate parking capacity?***

This project will not impact parking capacity.

- g) ***Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?***

This project will not conflict with any policies plans or programs supporting alternative transportation.

No impacts to transportation and traffic are anticipated.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Utilities and Service Systems. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) ***Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?***
 The project is located in a remote portion of Butte County (Phase 3 and Phase 5) and Yuba County that has no wastewater collection or treatment facilities.

- b) ***Would the project 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?***
 No new wastewater facilities will be constructed nor will there be an expansion of water facilities attributable to project work.

- c) ***Would the project 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?***
 No new storm water facilities will be constructed nor will there be a necessity for expanding such infrastructure.

- d) ***Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***
 No new or expanded water entitlements will be required in order to complete or maintain project work

- e) ***Would the project result in a determination by the wastewater treatment provider that 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?***

There are no wastewater treatment providers operating within the project area.

- f) ***Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

Project work will not result in the need for a landfill.

- g) ***Would the project comply with federal, state, and local statutes and regulations related to solid waste?***

Project work will not result in the development of solid waste as defined in federal state and local statutes.

No impacts to utilities and public service systems are anticipated.

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Authority: Public Resources Code Sections 21083 and 21083.05.

Reference: Government Code Section 65088.4, Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21083.05, 21083.3, 21093, 21094, 21095, and 21151; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors* (1990), 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Government v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Discussion

a) ***Would the project have the potential to substantially 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?***

The Mitigation Measures listed and described in this Initial Study/Mitigated Negative Declaration document will prevent project work initiated in connection with the Forbestown Shaded Fuel Break project from having a significant impact on the environment within the project area or the surrounding landscapes of southeastern Butte County or Northeastern Yuba County.

b) ***Would 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.)***

The Forbestown Shaded Fuel Break project will be executed within a portion of southeastern Butte County and northeastern Yuba County that is very remote. The impactful activities to be completed in the execution of project work are relatively minor in their significance due to the project’s design, the limited area of impact

and the Mitigation Measures that have been incorporated into the work scope. A number of other similarly developed fuel break projects have been complete or are now in progress within the area. All of these have similar designs and were developed with similar Mitigation Measures. As a result, impacts on environmental conditions attributable to each individual fuel break effort will be minor and when considered as a system will not be cumulatively considerable. In addition the system of fuel breaks within this portion of Butte County and Yuba County will provide significant protection to the area's landscapes and natural systems. Finally, the landscapes to be impacted by the limited amount of project work envisioned for the Forbestown Shaded Fuel Break (mountain chaparral, pine and mixed conifer forests) are common within this portion of the Sierra Nevada foothills and as a result significant areas of similar habitat are located near or adjacent to this project's impact area. Consequently it anticipated that the project will have no negative environmental impacts that are individually limited but cumulatively considerable. Also no resources or environmental issues within the project area were identified that could not be rendered less than significant.

c) *Would the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?*

The various project areas for all phases of the overall Forbestown Shaded Fuel Break project are very remote. Although the techniques to be used in the development of fuel break infrastructure will have temporary impacts to local watershed resources which will be rendered less than significant through the implementation of Mitigation Measures; no direct negative impacts to area residents is anticipated. It is expected that impacts to public safety from catastrophic wildfire and improved roadway sight conditions will have a positive effect on local residents.