Attachment B

Gallo, Delicato & Stone CalVTP # 2023-02

Biological Resource Assessment

- The following are all rare, threatened, endangered, and Species of Special Concern known to occur within the 9-quads queried. Information was taken from up-to-date CNDDB and CNPS listings.

Birds

- A note on birds of prey and the treatments proposed on this project: The treatments proposed will have very little effect on the habitat types these species rely on. Most of the treatments are focused on removing dead and down debris, along with understory vegetation. The result will be the creation of better foraging habitat for birds of prey, due to the decrease in places for food sources to hide, which is currently at elevated levels. LWD will be retained throughout the units, as it is infeasible to treat all of this material. Also, LWD is not responsible for causing high intensity wildfire. This will ensure habitat is retained for prey species.

  These species usually create nests high off the ground in large old trees. These types of trees are not targeted for removal unless they are a rotten snag near a ridgeline fuel break or pose a safety risk to people or property. These trees will be assessed by an RPF or qualified biologist prior to removal.

Osprey (*Pandion haliaetus*)
Status: Board of Forestry Sensitive
Habitat Requirements: Some ospreys are year-round residents in Sonoma County, while the majority overwinter in Mexico and South America. Ospreys are strictly associated with large, fish-bearing waters, primarily in ponderosa pine through mixed conifer habitat types. Osprey are only able to dive up to three feet in depth, hence are typically associated with shallow fishing areas. These birds require open, clear water for foraging, such as rivers, lakes, reservoirs, estuaries, lagoons, swamps, marshes, and bays. Large trees, snags, and blown-out tree tops in open forest habitats are used for cover and nesting. Tall, open-branched "pilot trees" are required nearby for landing before approaching the nest and for practice by the young (Zeiner et al. 1990a). Nests are a platform of sticks near or on the top of large snags, blown-out trees, cliffs, or on human-made structures. Nests are usually next to fish-bearing water, however may be up to twelve miles away. Nests may be used year after year thus producing a large nest. Nest trees in California range from 30 to 81 inches dbh with nest heights averaging 135 feet (Airola and Shubert 1981). The osprey breeds in northern California from the Cascade Ranges south to Lake Tahoe, and along the coast to Marin County.
Potential for Occurrence: There is a low potential for this species habitat within the project area. A small pond occurs within the project area, but the presence of fish within the pond is unknown. The closest fish bearing class 1 watercourse is over 1 mile from the project boundary. The project area has a general lack of high quality potential nest trees required by osprey. No individuals or nests were observed during field reconnaissance and the closest known occurrence is over 3 miles from the project boundary.
Potential Project Impact: The potential for the proposed activities to impact this species if located within the boundary is highly unlikely (see note on birds of prey above). If habitat occurs within the treatment units, watercourse and wetland protection measures along with BIO SPRs will prevent damage to this species foraging habitat, through the prevention of sedimentation of

downstream fish habitat. Also, large wildlife trees will be retained throughout the project area to provide potential high quality nesting habitat.

White-Tailed Kite (Elanus leucurus)
Status: Species of Special Concern
Habitat Requirements: White-tailed kites are yearlong residents in coastal and valley lowlands and are rarely found away from agricultural areas. White-tailed kites inhabit herbaceous and open stages of most habitats mostly in cismontane California. White-tailed kites forage for voles and other rodents in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands (Waian and Stendall 1970). Nests are made of loosely piled sticks and twigs and lined with grass or straw. Nests are placed near the top of dense broadleaved deciduous trees, approximately 6-20 meters above ground.
Potential for Occurrence: There is a low to moderate potential for occurrence in or near the project area. Areas which would make ideal nests were examined (i.e. large snags with broken or flat tops) and no nests or individual occurrences were observed. The closest known occurrence is more than 3 miles from the project boundary.
Potential Project Impact: Due to the scope of treatments proposed, there is a very low potential for impact to this species (see note on birds of prey above). With the implementation of the SPRs listed in the PSA, it is not anticipated there would be a significant negative impact to this species or its habitat. It is anticipated that a net benefit from proposed treatments will occur as a result of the improvement to foraging habitat.

Great Blue Heron (*Ardea herodias*)
Status: Species of Special Concern
Habitat Requirements: Great blue herons are common in shallow estuaries, and fresh and saline emergent wetlands. Foraging areas include river and creek banks, ponds, lakes, and watercourses in mountainous areas. Nest trees are called "rookery" trees; *A. herodias* is a colonial nester. This species requires lakes, ponds, streams, rivers, marshes, or wet meadows for foraging on aquatic invertebrates, frogs, snakes, and fish (Cogswell 1977). Great blue herons are yearlong residents of Sonoma County.
Potential for Occurrence: There is a low to moderate potential for this species to occur within the project area. The small ponds within the project boundary provide potential habitat. This species was not observed during reconnaissance surveys and the closest known occurrence is over 3 miles from the project.
Potential Project Impact: Due to the scope of treatments proposed and the inclusion of this species in SPR BIO-2 crew training, the potential impact will be less than significant.

Burrowing owl (*Athene cunicularia*)
Status: Board of Forestry Sensitive
Habitat Requirements: Burrowing owls occur in open, dry grassland and desert habitats, and in grassland, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. They use rodent or other burrows for roosting and nesting cover.
Potential for Occurrence: The habitat for this species is lacking within the project area. The closest known occurrence is approximately ½ a mile to the north east of the property boundary. The individual was observed using a drain pipe within a vineyard.
Potential Project Impact: Due to the lack of habitat and scope of treatments proposed it is highly unlikely that this species will be impacted negatively. There is expected to be an improvement in foraging habitat resulting from treatments.

Purple Martin (*Progne subis*)
Status: SSC
Habitat Requirements: Purple martins often nest in tall old-growth trees or snags in coniferous forests with multilayered canopy. They are second cavity nesters, using old woodpecker cavities and crevices in rocks, trees, and cacti (Baicich and Harrison 2005). Nests are typically found in open areas near water. Purple martins typically nest in colonies. The purple martin diet consists of beetles, flies, dragonflies, damselflies, leafhoppers, grasshoppers, crickets, butterflies, moths, wasps, bees, caddisflies, spiders, cicadas, termites, and mayflies.
Potential for Occurrence: There is a low potential for habitat within the project area. No individuals were observed during reconnaissance surveys and the closest known occurrence is greater than 3 miles.
Potential Project Impact: Due to the low potential for occurrence and scope of treatments proposed it is highly unlikely that this species or its habitat will be impacted negatively.

Mammals

Pallid Bat (*Antrozous pallidus*)
Status: SSC
Habitat Requirements: Pallid bats occupy a wide variety of habitats, such as grasslands, shrublands, and forested areas of oak and pine, but prefer rocky outcrops with desert scrub (Zeiner et al. 1990b). The pallid bat roosts in caves, mines, crevices, buildings, under bridges, and occasionally in hollow trees. Day roosts are located at sites that provide protection from the heat of the day; Night roosts are in more open areas such as porches or open buildings (Zeiner et al. 1990b). They roost in small groups of 20 or more. They do need water, but have a good urine-concentrating ability, so they don't have to roost within close vicinity of a water source (Geluso 1978). In California, pallid bats do not migrate, but make local movements to hibernacula and during post-breeding. Pallid bats feed on a wide variety of relatively large ground dwelling or slow flying insects and arachnids (Zeiner et al. 1990b). Colonies of *A. pallidus* will typically emerge about 1 hour after sunset, return to roost, and then forage again before dawn. Specializes in foraging on insects on the ground, versus in the air, by listening for the insect footsteps. The pallid bat is found throughout most of the western U. S. and Mexico. In California, the bat is widespread in low elevations with the exception of the high Sierra Nevadas from Shasta to Kern counties and in the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County (Zeiner et al. 1990b).
Potential for Occurrence: There is a low potential for occurrence within the treatment area due to lack of preferred habitat. No individuals were located during field reconnaissance. Suitable habitat was not located and the closest known occurrence is greater than 1 mile south west of the project area near dry creek road.
Potential Project Impact: The potential for this project to impact this species or its habitat is very low, mainly due to the general lack of high-quality roosting habitat within the project area.

Townsend's Big-Eared Bat (*Corynorhinus townsendii)*
Status: SSC
Habitat Requirements: *C. townsendii* inhabits southwestern British Columbia, Canada and most of the western U.S., east to the Great Plains, and south from western Texas into central Mexico. Isolated populations of central and eastern U.S. Townsend's big-eared bats are most common in mesic sites but are found in a variety of habitats including coastal conifer and broad-leaf forests, oak and conifer woodlands, arid grasslands and deserts, and high-elevation forests and meadows. Roosting, maternity and hibernacula sites in California include limestone caves, lava tubes, mine tunnels, buildings, and other man-made structures.
Roost structures that could be classified as cave analogues and that function as maternity roosts or hibernacula include large trees (minimum dbh of 8 ft.; adapted from maternity roosts in large redwood trees) with large basal hollows and an internal roost area large enough for flying forays (larger than the entrance). The roost ceiling must be dome-like (allowing for multiple bats to roost in clusters) and occur at least 1 ft. above the top of the entrance (allows for better protection from predators and changing microclimates). The only light penetrating the roost area must originate from the roost entrances so that the internal roost area remains semi-dark to dark. Suitable habitat is described as basal hollows in trees 42" dbh and greater having all of the following characteristics:

- An opening equal to or greater than 2 square feet.
- An internal cavity extending above the entrance equal to or greater than 12 inches.
- An internal cavity equal to or greater than 3 feet above the ground.

Potential for Occurrence: There is a very low potential to locate this species or suitable roost trees. There are no known Townsend's big-eared bat colonies and no known mine shafts, caves or large trees with basal hollows as described above, in or near the project area. No potential trees within or adjacent to the plan area that meet the criteria for this species roosting habitat were observed and the closest known occurrence is greater than 3 miles away.

Hoary Bat (*Lasiurus cinereus*)
Status: SSC
Habitat Requirements**:** This bat is one of the few bats known to both migrate south for winter and to hibernate locally. *L. cinereus* prefers a diet of moths, yet will also consume beetles, wasps, flies, grasshoppers, dragonflies, and termites. Hoary bat daytime roosts are typically dense foliage of medium to large sized trees. This bat occupies a variety of habitats including dense forest, forest edges, coniferous forests, deserts, and broadleaf forests.
Potential for Occurrence: There is moderate potential for this species to occur within the treatment units. No individuals nor suitable nest sites were observed during field reconnaissance and the closest known occurrence is greater than 3 miles from the boundary.
Potential Project Impact: The project as proposed is not anticipated to have a significant effect on this species. Treatments as proposed will not significantly alter potential habitat.

Sonoma Tree Vole (*Arborimus pomo*)
Status: SSC
Habitat Requirements**:** This species occurs along the North Coast of California. Sonoma Tree Voles are entirely arboreal. This species lives, nests and feeds in the forest canopy and have been found in various stand size classes of Douglas-fir, bishop pine and grand fir. They feed on the vascular cambium of Douglas-fir, grand fir and bishop pine needles while the unconsumed

resin ducts (from the needles) are used for nest lining. Over-time resin ducts accumulate in the nest and the surplus is discarded from the nest by the animal. A visual search of the forest canopy for active nests is usually complimented by an inspection of the forest floor, upon which, matted clusters of resin ducts can usually be observed.
Potential for Occurrence**:** The project area does contain potential habitat for the Sonoma Tree Vole. A visual search of the canopy for stick nests and the forest floor for discarded resin ducts, which accumulate below vole nests was conducted. No discarded resin ducts or STV nests were observed; however, they could be hidden up in the canopy. The closest known occurrence is more than 3 miles.
Potential Project Impact: Due to the level of treatments proposed, there is a low potential for impact to this species. With the implementation of the BIO SPR-2 listed in the PSA, it is anticipated there would not be a significant impact to this species or its habitat.

North American Porcupine (*Erethizon dorsatum*)
Status: SSC
Habitat Requirements: North American porcupines range from Canada, Alaska, into northern Mexico, and primarily west of the Rocky Mountains. They are commonly found in coniferous and mixed forested areas, but have adapted to harsh environments such as shrublands, tundra, and deserts. They make their dens in hollow trees, decaying logs, and caves in rocky areas.
Potential for Occurrence: There is a moderate potential for this species to occur within the treatment area. No individuals or their dens were observed during field reconnaissance and the closest known occurrence is over 3 miles from the treatment area.
Potential Project Impact: Low potential. Large downed hollow logs and trees with basal hollows will be retained where feasible. With implementation of SPR-BIO 2 workers will be trained on identification of this species and its dens. If located, work will stop and the RPF or qualified biologist will be notified to develop protection measures.

Amphibians and Reptiles

Western Pond Turtle *(Emys marmorata)*
Status: SSC
Habitat Requirements: The pond turtle is associated with permanent ponds, lakes, streams, or pools in a wide variety of habitats. It requires basking sites in the aquatic environment, grassy openings for nest sites - which are typically within 100 meters of a water source, although nests up to 500 meters have been recorded (Thomas et al. 2016).
Potential for Occurrence: There is low - moderate potential for this species to occur within the project area mainly around the ponds.
Potential Project Impact: There is low potential for this species to be impacted by operations due to WLPZ protection measures implemented with SPR HYD-4. If egg nests happen to be located outside of the WLPZ, there is potential for them to be impacted by operations. SPR BIO-2 training for workers will reduce this potential impact to a level of insignificance.

California Giant Salamander (*Dicamptodon ensatus*)
Status: SSC

Habitation Requirements: *Dicamptodon* salamanders are year-round residents of California. In 1989, these salamanders were split into two species – California giant salamander (*Dicamptodon ensatus*) occurring south of the Mendocino County line and the coastal giant salamander (*Dicamptodon tenebrosus*) occurring in the north (Thomas et al. 2016). A hybrid zone exists approximately 6 miles north of Gualala; however outside of this area, the two species are known to be distinct (Thomas et al. 2016).
This species occurs in wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages.
Potential for Occurrence: There is a moderate potential for occurrence within the project area around class II watercourses and wet areas. The closest known occurrence was immediately adjacent to the project area along Peterson creek. No individuals were encountered during field reconnaissance.
Potential Project Impact: There is no potential for impact with the included mitigation measures HYD-4. The establishment of a WLPZ will protect this species and its habitat during treatment activities.

California Red-Legged Frog (*Rana draytonii*)
Status: Federally Threatened
Habitation Requirements: California red-legged frogs (CRLF) primarily inhabit permanent or nearly permanent water sources (quiet streams, marshes, and ponds). Breeding tends to occur primarily in ponds, less likely in streams, and happens from November to April. This frog will also use upland habitats outside of the breeding season and may be discovered under logs, rocks, and other debris during wet conditions.
Potential for Occurrence: There is a low-moderate potential for individuals to occur within the treatment areas near class I or II watercourses & springs. No individuals were encountered during field reconnaissance and the closest known occurrence is greater than 3 miles from the project boundary.
Potential Project Impact: Due to the scope of treatments proposed, there is a low potential for impact to this species. With the implementation of the BIO SPRs and HYD SPRs listed in the PSA, it is not anticipated there will be an impact to this species or its habitat. Watercourse protection measures will ensure retention of crucial habitat. Also, equipment exclusion from watercourse and lake protection zones (WLPZ) will further reduce the likelihood of take resulting from heavy equipment use. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species is more likely to be active outside of the WLPZ. This species will be included in SPR BIO-2 worker training.

Red-Bellied Newt (*Taricha rivularis*)
Status: SSC
Habitation Requirements: The red-bellied newt ranges within Mendocino, Sonoma, Humboldt, and Lake Counties. They are predominantly found in redwood forests, along the coast, however, they have also been detected in mixed conifer, oak woodland, and other forest types particularly when near streams. The preferred aquatic breeding habitats are moderate to fast-flowing streams with rocky substrates. Breeding coincides with the receding of streams after heavy winter rains. Adults are terrestrial and the aquatic breeding phase lasts from February to May. After breeding, adults leave streams but usually stay in the same drainage; however, they are also known to travel several kilometers between breeding years. Underground retreats are used from May to October, and adults forage on the surface before and as they migrate to streams. (Thomas et al. 2016).

Potential for Occurrence: There is a moderate potential for individuals to occur within the treatment areas, particularly near perennial watercourses within the treatment areas. No individuals were encountered during field reconnaissance. The closest known occurrence is greater than 3 miles from the project area.
Potential Project Impact: There is a low potential for this species to be impacted during operations, but this will be mitigated with the following: The implementations of a WLPZ via SPR-HYD 4 and BIO-4 will greatly reduce the potential impact to individuals and will preserve breeding habitat. SPR BIO-2 will ensure workers are trained on the identification of this species, so that occurrences can be avoided during operations. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species is more likely to be active outside of the WLPZ.

Foothill Yellow-Legged Frog *(Rana boylii)*
Status: California endangered throughout inland range; Coast range is delisted
Habitation Requirements: Foothill Yellow-Legged Frogs (FYLF) are associated with lower elevation streams draining the Pacific slope from west-central Oregon to northwestern Baja California. Foothill yellow-legged frogs occupy a diverse range of ephemeral and permanent streams, rivers, and adjacent moist terrestrial habitats over the course of their complex life history. Small streams often have dense canopies that limit the light needed by algae, the food resource of tadpoles. Adults can migrate down the drainage network to channels that are broad and more sunlit. Occupied streams are often partly shaded, low gradient, and dominated by coarse, unconsolidated rocky substrates. Seasonal variation in streamflow has a strong influence on life history and movement. To avoid disturbance and optimize feeding by tadpoles, adults breed, and tadpoles develop in slow water velocity habitats. Reproduction occurs in synchrony with the transition from winter and spring snowmelt freshets to summer drought.
Potential for Occurrence: There is a high potential for this species and habitat to exist within the treatment areas. No individuals were encountered during field reconnaissance, but the closest known occurrence is 1,200 ft east of the project area.
Potential Project Impact: There is little to no potential for this species to be impacted by this project with the implementation of HYD-4 WLPZ protections.

Fish & Crustacean

Coho salmon *(Oncorhynchus kisutch)* Central California Coast ESU,
Steelhead *(Oncorhynchus mykiss)* Central California Coast DPS
California freshwater shrimp *(Syncaris pacifica)*
hardhead *(Mylopharodon conocephalus)*
Russian River tule perch *(Hysterocarpus traskii pomo)*
Gualala roach *(Hesperoleucus parvipinnis)*
Habitat: Class I watercourses.
Potential for occurrence**:** There is potential for all these species to occur outside the project area. The closest class I is over 1 mile from the project area.
Potential Project Impact: With the implementation of the SPR HYD-4, and GEO 1-3 listed in the PSA, it is not anticipated there will be an impact to this species or its habitat. Watercourse protection measures and wet weather treatment restrictions will ensure the protection of crucial habitat, through the prevention of downstream sedimentation or increased water temperatures.

Insects

Obscure bumblebee (*Bombus califinosus*)
Status: None
Habitat Requirements**:** The obscure bumble bee is a species of bumblebee native to the west coast of the United States, where its distribution extends from Washington through to Southern California. The workers are most often seen on Fabaceae, the legume family, while queens are most often seen on Ericaceae, the heath family, and males have been observed most often on Asteraceae, the aster family. Common plants visited by the workers include ceanothus, thistles, sweet peas, lupines, rhododendrons, Rubus, willows, and clovers.
Potential for Occurrence: There is a low potential for occurrence within the project area because the required habitat is mostly lacking and of poor quality. Small forest openings exists but they are few and generally less than ½ acre in size. The closest known occurrence is more than 3 miles from the project boundary.

Western bumblebee (*Bombus occidentalis*)
Status: Candidate under CESA
Habitation Requirements: The western bumble bee was once very common in the western United States and western Canada. This species will visit a range of different plant speices and are considered generalist pollinators of a wide variety of flowing plants and crops (Goulsen 2003a; Heinrich 2004). This species is believed to be limited to mostly high elevation meadows and coastal areas. This genus is encountered mostly along stream banks, in meadows, recently burned or logged areas, or on flowers by roadsides. Fire exclusion is a threat to this species due to the increase in forest density and reduction of open areas.
Potential for Occurrence: There is a low potential for occurrence within the project area because the required habitat is mostly lacking and of poor quality. Small forest openings exists but they are few and generally less than ½ acre in size. The closest known occurrence is more than 3 miles from the project boundary.

Sensitive Natural Communities

The *Quercus Kelloggii – Arctostaphylos patula* relationship is listed as sensitive and the *Quercus agrifolia – Quercus kelloggii* is listed sensitive as well. This stand will be protected with mitigation measures listed in the biological section below. See impact BIO-3 for more information.

- Avoid high intensity fire within this area. Limit burn pile density to < 17 piles/acre, or ~ 50 ft between piles.
- For all treatments within this mapped area, a minimum of 50 percent relative cover of existing Manzanita and associated native understory vegetation will be retained (evenly or in a mosaic pattern) throughout the treatment area.
- Retain all Oak species not posing a risk to public safety.

Botany Report to be Amended
Pending Late Season Survey Results

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