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**Ebbetts Pass Forest Watch Comments on Timber Harvest Plan No. 4-07-037/TUO-6  
(Cow Camp THP)  
March 4, 2008**

Ebbetts Pass Forest Watch (“Ebbetts Pass”) hereby submits the following comments on Timber Harvest Plan No. 4-07-037/TUO-6 (“Cow Camp THP”), proposed by Sierra Pacific Industries (“SPI”). Ebbetts Pass is writing on behalf of Ebbetts Pass Forest Watch, Forest Ethics, Forests Forever, and the California Oak Foundation. As discussed below, we have concerns regarding the impacts on wildlife and other forest resources from the type of even-aged plantation forestry that SPI practices, including clear cutting, replanting with limited-species conifers and spraying with herbicides to suppress early successional brush vegetation. The Cow Camp THP is a good illustration of the potentially significant impacts to the environment that may occur from SPI’s practices.

CAL FIRE should consider these comments and require SPI to conduct its logging operation in a manner that retains adequate functional habitat for wildlife, while still allowing for the commercially viable harvest of timber, as required by the Forest Practice Act and Rules. There are viable alternatives that would retain important habitat elements for wildlife and avoid the conversion of most of SPI’s parcels into managed tree farms, with limited value for wildlife. We also join in the comments submitted by the Central Sierra Environmental Resource Center (“CSERC”).

## **A. Background on Cow Camp THP**

The Cow Camp THP lies approximately 8 miles northeast of State Highway 4, within the Middle Beaver Creek watershed in Tuolumne County. SPI owns approximately 85% of the land within this watershed. The Cow Camp THP is located within the larger Beaver Creek Watershed complex, which has been designated a Keystone Watershed by the State of California. *See* Cal. State Parks, 2007. The Middle Beaver Creek watershed is also only a portion of the overall Beaver Creek Watershed, which includes the Upper and Lower Beaver Creek Watersheds. The planning area is located within a State Game Refuge and lies just northeast of Calaveras Big Trees State Park.

Topography ranges from flat to 45% slope and ranges in elevation from 4,800' in the west to 5,600' feet in the east. Conifers in the area include ponderosa pine, sugar pine, incense cedar and white fir. The THP states that all ages are represented in the areas to be logged, with the age of the majority of the trees ranging from 70 to 120 years old, and that the overstory of medium to large trees (> 24" dbh) averages 10-11 trees per acre. The THP also states that basal area per acre is extremely variable but generally ranges between 100 to 180 square feet per acre.

The THP proposes timber operations on 672 acres, with 109 acres of clearcutting, 140 acres of visual retention, 317 acres of commercial thinning and 105 acres for operational area buffers. Visual retention (or "VR") is similar to clearcutting except that 4 to 8 smaller size (8" to 16" dbh) trees per acre are left, either clumped (known as "visual retention grouped" or "VRG") or dispersed (known as "visual retention dispersed" or "VRD"). Under either VR type, 95% of the basal area is removed. Post harvest stocking for the thinning treatment will be at or above 100 square feet of basal area, with at least 15 square feet in trees 18" dbh or greater.

## **B. Comments on Cow Camp THP**

### **1. The THP does not maintain adequate amounts of Functional Wildlife Habitat in the Planning Watershed**

The California Forest Practice Rules ("FPR") 897 requires the THP to "Maintain functional wildlife habitat in sufficient condition for continued use by the existing wildlife community within the planning watershed." "Functional Wildlife Habitat" means "vegetative structure and composition, which function to provide essential characteristics for wildlife feeding, reproduction, cover and movement between habitats. The habitat components must be in sufficient quantities and arrangement to support the diverse assemblage of wildlife species that are normally found on or use forestlands within that area." As discussed below, the Cow Camp THP does not maintain functional wildlife habitat within the Middle Beaver Creek Watershed.

#### **a. Components of Late Seral Forest**

Many wildlife species affected by this THP, such as the California spotted owl, Pacific fisher, flying squirrel, pileated woodpecker etc, require components of late seral forest. The Forest Practice Rules describe these components as “large trees as part of a multilayered canopy and the presence of large numbers of snags and downed logs that contribute to an increased level of stand decadence.” *See* FPR 952.9 Appendix Technical Rule Addendum # 2 (“TR2”) Section C.4.f. Such habitat is part of the functional habitat to be retained for wildlife species that depend on it. *See* FPR 895.1; 897(b)(1)(C).

The Cow Camp THP states that over time, SPI’s even-aged conifer plantations will provide functional habitat for wildlife species that require late seral forest habitat. However, the THP does not explain how plantations will provide late seral habitat components over time. The THP does not retain or recruit components of late seral forest in the planning area and does not demonstrate how large, old trees will be retained or recruited within the planning area or planning watershed. Spotted owls and fisher require large (>40" dbh), old, decadent live and dead trees for nesting, denning, and resting. These structures must contain decadent elements such as cavities, broken tops, platforms etc. A 50 to 80 year plantation does not provide these late seral habitat components. *See e.g.*, Exs. 1, 4-7.

The Cow Camp THP also does not require that retained forest, or forest developed over time, contain multi-layered canopies or large downed woody material. *Id.* The THP states that larger woody debris (>24" dbh) will be left in place in the plan area “to the extent that planning and future treatments are not impeded.” The THP also states that SPI has an objective to leave snags on the ground, but only commits to leave 1 large snag every 50 acres. These standards, to the extent they mean anything, are well below the levels typically found in occupied owl habitat. *See* USDA (2001); Verner (1992); Exs. 1, 4-7. *etc.* Where retention occurs, it is not coordinated with retention of interior forest habitat with value to old forest species such as owls and fisher. The THP states that downed woody material and snags could be retained in VRGs, but these areas are too small to provide valuable habitat.

#### **b. Functional Late Seral Habitat Connectivity**

The Forest Practice Rules state that the “fragmentation and resultant isolation of late seral habitat types is one of the most significant factors influencing the sustainability of wildlife populations not adapted to edge environments.” *See* TR2, Section C.4.g. Here, the Cow Camp THP does not adequately analyze late seral habitat connectivity except to say that riparian corridors could provide that connectivity. As discussed below, riparian corridors are inadequate to ensure late seral habitat connectivity because 1) they are too narrow to act as functional habitat themselves; 2) they do not ensure retention of late seral components; and 3) do not offer sufficient connectivity across the broader landscape of wildlife species such as owl and fisher to survive. *See also* Exs. 4-8, Zielinski 2006b.

The planning area in this THP generally does not contain large blocks of high quality habitat, as shown by the general habitat characterizations of areas around identified owl activity centers no longer occupied by owls. *See* Ex. 8. The THP does not discuss whether smaller

blocks of late seral habitat may occur in these areas that over time could establish effective late seral habitat connectivity. Given the information presented, it appears from the THP that species dependent on late seral habitat are isolated in pockets of unconnected habitat within the watershed. *See e.g.*, Exs. 1, 4, 8. Further, the loss or failure to allow for the establishment over time of functional late seral forest in the watershed creates an effective habitat barrier between the high quality habitat existing to the west in Calaveras Big Trees State Park and to the east in higher elevation Forest Service lands. *Id.*

### **c. Functional Habitat for Nesting, Roosting and Foraging**

Spotted owls and fisher also require adequate amounts of quality habitat for nesting, roosting, denning and foraging. Nesting habitat for owls consists of multistory canopied forest made up of large trees (> 24" dbh) high overhead canopy cover, typically greater than 70%. *See* Seamans (2005); Blakesley (2003, 2005a & c,) Exs. 1, 4-5, 8. Fisher resting and denning areas require medium to large forests located around a large tree structure with canopy cover at approximately 90%. These areas of high quality habitat must be generally distributed across the landscape. *See e.g.*, Zielinski (2004a & b, 2006a & b); U.S.D.A. (2007), Mazzoni (2002); Truex (1998); Exs. 1, 6-7. At this time, the planning area lacks habitat with canopy cover over 70%. *See* Ex. 8. The THP will further reduce the potential that this area could over time provide such habitat. *Id.*

As discussed below, the Cow Camp THP does not retain or recruit quality nesting, denning or resting habitat in the planning area. Neither the proposed clearcutting nor the VR prescriptions for logging on this project retain any usable habitat for wildlife. The Cow Camp THP states that VR areas may function as wildlife retention areas ("WRAs"). However, the small amount of trees left in the VR prescription (4-8 small to medium size trees) does not provide adequate habitat for owls, fisher or other species reliant on late seral forest and highly forested habitat. In addition, the THP does not state that the retained trees will be a source of recruitment for future late seral habitat.

The THP states that adequate habitat will be recruited over time as new plantations grow into larger trees. However, the plantations will not offer any nesting, denning or resting habitat because they will lack old, large decadent trees, high canopy cover, adequate downed woody material and large snags, and multi-story canopies. *See* Zielinski (2004b) & Table 2; Exs. 1, 4-7. Further, even after trees grow back over time, it will be many decades before the logged areas offer any usable habitat, even if only for foraging. *Id.*

At this time, the watershed planning area is composed of forest stands with small to medium sized trees and poor to medium canopy cover. *See* Ex. 8. Measured at the stand level (greater than 20 acres), this habitat does not offer potential nesting, denning or resting habitat. However, at the smaller scale of less than 20 acres, the THP area is likely to contain patches of large trees and late seral habitat components. The THP does not provide any information about how this essential functional habitat is being currently provided or how the logging proposed in this THP will further reduce isolated patches of whatever high quality habitat may exist at the

micro-scale of less than 20 acres, which may have the potential to offer current or future high quality habitat for wildlife species such as the fisher and owl.

#### **d. Oaks & Other Hardwoods**

Large, old black oaks and other hardwoods are a critical habitat component for wildlife nesting, denning, roosting, resting and foraging. *See e.g.*, Ex. 1. For spotted owl, large, old black oaks (> 30 dbh) are a preferred nesting tree for spotted owls. *See* North 2002; Exs. 4-5. Large mature oaks also provide critical habitat for fisher denning and resting sites. *See* Zielinski (2004b), Exs. 1, 6-7. Mature oaks also provide essential mast for deer forage. *See* Exs. 1, 3, 9.

The THP provides no protection for large oaks and other hardwoods. Instead, the THP proposes to retain 75% of oak trees above 12" dbh. However, the THP does not state how many large oaks will be left after logging. Under this approach, SPI may remove the largest 25% of oaks over 12", thus eliminating mature oaks in the planning area. SPI routinely removes large black oaks as part of its even aged management logging. *See* CSERC comments.

In addition, the Cow Camp THP does not protect oaks under 12" dbh and thus does not ensure future recruitment of oaks in the watershed that may now occur as younger seedlings and saplings. The Cow Camp THP does not provide the required information necessary to know how many deciduous oaks of all sizes and ages currently exist within the planning area, how many will be retained after logging is concluded and how functional habitat will be provided over time for species dependent upon deciduous oaks. *See* TR2, C.4.e. The planting of dense conifer stands and use of herbicides will preclude the establishment of new oaks in plantations and will kill those oaks that are not logged as part of the plan. *See* Ex. 13.

#### **e. Early Successional Vegetation**

The Cow Camp THP will eliminate early successional vegetation, which is important for many wildlife species, including deer and prey species of owl and fisher. *See* CDFG (1998); Kucera & Mayer (1999); USDA (2007.) *See also* Exs. 1, 3-7, 11-13. The THP eliminates this habitat through the spraying of herbicides, which are designed to eliminate post-logging brush competition. However, such brush is the main component of early successional growth following a disturbance. *Id.*

The Cow Camp THP does not assess the impacts of eliminating early successional vegetation as part of the forest succession cycle. Instead, the THP states that understory vegetation will eventually return. However, the vegetation that eventually occurs below conifers in plantations is by definition not early succession vegetation since it does not follow from disturbance, is based primarily on random seed growth rather than brush regeneration and thus lacks the normal understory component composed of nutrient rich brush and forbs that have been eliminated by herbicides and occurs after conifers are already established on the landscape. *See* CDFG (1998); Exs. 11, 12, 13.

**f. SPI's Even-Aged Management Approach does not Ensure that Functional Habitat will be Retained within the Planning Watershed and in the Region on SPI Lands**

The Cow Camp THP is representative of SPI's even-aged management approach and thus demonstrates that the critical functional habitats described above will not be retained on SPI lands within the planning area and larger region, including the areas encompassing the larger Beaver Creek Watershed Complex (*see* Ex. 2), the state Game Refuge Area, the Area of Concern No. 5 and the area covered by SPI's Option A document. *See* Exs. 5, 8, 12.

**2. The THP Does Not Assess the Impacts to Wildlife Corresponding to Functional Wildlife Habitat Discussed above**

A THP is the functional equivalent of an environmental impact report prepared under the California Environmental Quality Act ("CEQA") and must comply with all CEQA policies. As discussed below, the THP does not adequately assess impacts to several wildlife species.

**a. Impacts to Spotted Owl**

California spotted owls require late seral forest components for nesting and roosting, including large, old decadent trees with broken tops or canopies, snags, large downed logs, multi-layered canopies, and high canopy cover. A critical component for owl nesting is the presence of large, old decadent trees. *See* Gutiérrez et al. 1992; Bias & Gutierrez, 1992; LaHaye (1999); North (2000); Blakesley (2003); U.S.D.A. 2001. *See also* Exs. 1, 4-5. Owls nest in large trees (> 40 dbh) with decadent features necessary to create cavities and platforms formed by broken tops. *Id.* Owls also require high quality habitat around these nesting areas. Studies show that owl survival is correlated with forests consisting of large (>24") trees with high (>70) percent canopy cover, with multiple canopies and substantial amounts of downed logs and snags, which provides optimal habitat for California spotted owl nesting, roosting, and foraging in the Sierra Nevada (Call et al. 1992; Gutiérrez et al. 1992; Moen and Gutiérrez 1997; Bond et al. 2004; Blakesley et al. 2005a; Seamans 2005). Studies also show that the 500 acre area around an owl nesting site is composed of 50% high quality habitat (measured as average tree size > 24" and average canopy > 60%..) and 80% suitable habitat (measured as average tree size > 12" and average canopy > 40%.) Blakesly (2005a & c); *See also* Exs. 4-5, 8.

The Cow Camp THP does not provide for retention or creation over time of these habitat elements or this level of habitat quality. The THP also does not explain how this THP will not have significant impacts to owls in the planning area.

The THP states that owls will be protected by retaining some trees within watercourse in the planning area. However, the retention of 75 foot buffers along a watercourse will by itself not actually preserve any effective interior forest habitat. *See* Exs. 1, 4-5. Further, the retention standards that would be maintained in Class 1 watersheds would not meet the standards for nesting habitat as measured in recent studies. *See* Blakesley et al. 2005a & c; Seamans 2005.

Such standards allow for overhead canopy cover to drop below 40% and the removal of up to 75% of the existing overstory canopy. These standards are below the minimum habitat requirements for owls. *See* Exs. 1, 4-5. In addition, the retention standards contain no size limitations for the trees that may be logged and thus do not ensure the retention of the largest, oldest trees that can provide current or future nesting habitat potential for spotted owls. *Id.* The smaller buffer zones and lesser stream course protections proposed for Class 2 and 3 streams also do not provide effective habitat for spotted owls. *Id.*

The THP states that it will protect occupied owl nests by suspending all vegetation disturbing activities within 1/4 mile of the occupied nest until SPI designates the nest tree, perch tree(s), screening tree(s) and replacement tree(s), which shall be left standing and unharmed. However, leaving simply the nest tree and several other surrounding trees does not provide adequate habitat for the spotted owl because it does not protect enough habitat and because it only protects occupied sites. *See* Exs. 1, 4-5. Owls do not nest every year and thus a site that is unoccupied one year must still be considered critical habitat for long term survival of owls. In addition, the selection thinning prescription would result in habitat below the levels used by owls for both nesting and foraging. *Id.*

The Cow Camp THP states that even-aged conifer plantations will provide functional habitat for wildlife species that require old forest habitat. However, the immediate effects from logging this THP and others like it in the planning area and beyond will be to eliminate adequate habitat for owls. The THP does not address the reasons for the current absence of historically present owls in the planning area or how owls will occupy this area in the next few decades. However, the evidence suggests that owls lack adequate habitat to survive in their former activity centers. *See* Ex. 8. The result of this lack of habitat is that nearest neighbor distance for nesting owl is increased, which will make it even more difficult for dispersing owls to find suitable habitat areas and avoid habitat fragmentation and genetic isolation. *See* Exs. 1, 4-5; Blakesley, (2005b).

Further, as discussed above, the THP does not retain or recruit components of late seral forest in the planning area. Numerous studies demonstrate that owl nesting sites require large, decadent trees with decadent features such as broken tops, or side or top cavities. These elements of late seral habitat will not be retained or recruited within the planning area or planning watershed. The THP also does not purport to retain adequate amounts of large downed logs, snags, multi-story canopy or any other aspects of adequate nesting habitat. The elimination of this habitat in the planning area will have significant impacts on spotted owls.

#### **b. Impacts to Pacific Fisher**

The Pacific fisher (*Martes pennanti pacifica*) is a forest carnivore that is closely associated with older forests with medium and large trees, dense canopy cover, and abundant large snags and down wood (Zielinski et al. 2004). The most recent Forest Service report on this species states that “Fisher habitat in the southern Sierra Nevada is restricted to a relatively narrow band of mid-elevation forests, mostly on the western slope of the range, particularly on

mesic topographic positions (i.e., slopes experiencing relatively low annual exposure to solar radiation), and especially where older stands of mixed conifers, sequoia, or ponderosa pine tend to abut or intermix with montane hardwoods, especially black oak.” USDA 2007. This area includes the elevation range of the Cow Camp THP, which is 4,800 to 5,600 feet.

The fisher's current distribution in California comprises two populations, one in the southern Sierra Nevada and the other in the Klamath Province, separated by some 260 miles. The southern Sierra Nevada population is in danger of extinction because its overall numbers are so low. *See* Lamberson 2000; Zielinski 2004a & b, 2006a; USDA 2007; USDI 2004; Exs. 1, 6-7. The most recent figures estimate from 285 to 360 total fisher, including sub-adults, with a limited number of 57-86 adult females, whose survival is most important for overall population viability. *See* USDA 2007; Zielinski 2004a. This isolated population structure is a major reason that the USDI Fish and Wildlife Service decided the fisher warranted listing as threatened or endangered. USDI 2004.

Due to its small population size, high rate of adult mortality, isolation and other aspects of fisher demography, the existing fisher population in the southern Sierra is probably not viable over the long term in the absence of efforts to expand its existing range, especially to the north. *See* Exs. 1, 6-7. Researchers agree that if the local population does not experience immigration from other regions, it will be “at risk of extirpation” due to stochastic events such as disease or unusual weather patterns. USDA (2007). *See also* USDI (2004); Truex *et al.* (1998). Aubry and Lewis (2003.) Exs. 1, 6-7. *See also* USDI (2004) (“Additional populations of fishers will reduce the probability that a stochastic event would result in extirpation of these species.”)

The Cow Camp THP has the potential for significant impacts to fisher because it will remove for the long term late seral habitat components that the fisher needs to survive. The Pacific fisher is closely associated with late-succession, old growth forests; suitable habitat consists of dense (60-100% canopy cover), multi-storied forests with ample large, old and decadent trees, large snags, and downed logs in mid-elevation zones of the southern Sierra Nevada. *See* Powell and Zielinski 1994, Zielinski *et al.* 2004a, 2004b, 2005, 2006; USDA (2007); Exs. 1, 6-7. Changes in the quality, amount, and distribution of such habitat are likely to affect the fisher's range in the Sierra Nevada. *Id.*

In particular the Cow Camp THP does not retain the large old decadent trees and surrounding high quality forest habitat that make up potential fisher denning and resting sites across the landscape. Truex *et al.* (1998) found that the mean canopy closure of known fisher rest sites in the Sierra is over 90 percent, and the mean diameter at breast height of the four largest trees surrounding the rest sites was approximately 36 inches. In another study of southern Sierra fishers, Mazzoni (2002) found that fisher rest sites had significantly higher canopy closure, crown volume, log cover, basal area, canopy layering and large snag abundance than random sites and that trees and snags selected by fishers for rest sites were large and frequently had mistletoe infections. Zielinski (2004b) reviewed fisher rest site data from two different locations in the Sierra Nevada and found that fisher rest site structures were typically composed of large live trees or snags of approximately 46-47" dbh. The study noted “trees must be large and old to

decay to the point in which cavities useful to fishers will form,” which usually were 150 years or older. In addition, the study notes that fisher frequently used hardwoods, especially large black oaks, as rest structures in the Sierra. These and other studies have shown that fisher rest sites were typically surrounded with patches of high quality interior forest with high (>70% canopy cover) and trees of medium to large size. Zielinski (2004b, 2006a & b, 2007) ,Mazzoni 2002; Exs. 1, 6-7.

The Cow Camp THP also does not retain larger areas of high quality habitat in the planning area, which is necessary for fisher survival. *See* Exs. 1, 6-7; Zielinski (2004a) (female fisher home ranges in the southern Sierra averaged approximately 1,300 acres, of which 71.7% consisted of the densest canopy class (>60 %) canopy cover.)

The Cow Camp THP will degrade potential fisher habitat by eliminating patches of late seral forest that are critical for fisher survival. SPI’s plantation forestry will not create this habitat; even at maturity, an 80 year old plantation does not provide functional denning and resting habitat for fisher because it lacks the decadent elements characteristic of an older forest (greater than 150 years) such as cavities or broken tops that provide a refuge for fisher from predators and/or weather conditions. *See* Exs. 6-7, 11. *See also* Zielinski (2004b, 2006a & b, 2007). Further, the Cow Camp THP makes no provision for the protection of the largest black oaks in the planning area, although these are one of the most important habitat elements to retain due to their tendency to form cavities and provide structural diversity preferred by fisher. *See* Exs. 1, 6-7.

The THP’s failure to provide for the long term retention of such habitat is a significant cumulative impact because it will prevent fisher from being able to survive in the watershed. Further, the Cow Camp THP does not assess the amount of high quality habitat within the planning area nor does it describe the amount of higher quality habitat that will occur within the planning watershed over time as SPI implements its even-aged management approach. As discussed, studies show that female fisher require a high percentage of denser canopy habitat (>60%) over their home range area. The THP does not explain how this habitat will be provided over time.

The Cow Camp THP states that fisher habitat does not include areas of deep snow pack. However, the area of this THP (4,800 to 5,600 feet) is prime fisher habitat and the most important variable limiting snow depth is the amount of overhead forest canopy, which is also an important factor for measuring the quality of fisher habitat. *See* Exs. 1, 6-7.

The Cow Camp THP also states that habitat would be retained along stream zones. However, there is no requirement that the THP retain large old trees or snags in those areas. Further, reliance on riparian corridors alone does not ensure a sufficient degree of habitat connection to avoid habitat fragmentation because fisher require rest sites across the landscape, not simply along narrow corridors at the bottom of the watershed. *See* Zielinski 2004a, 2006b; Mazzoni 2002; Exs. 1, 6-7. Further, the evidence shows that the narrow strips of habitat, if were they of high quality, do not offer any actual interior forest habitat and thus have limited benefit

to fisher. *See* Exs. 4, 6, 8.

Fisher will also be harmed by herbicides, which will remove the early succession growth that provides great benefits to a range of wildlife in the forest, including important fisher prey species. *See* USDA (2007); Exs. 1, 6-7. Even-aged forestry using clearcutting or variable retention followed by herbicide applications will significantly limit the value of these areas even for foraging habitat. *Id.*

The cumulative impacts of this THP, in combination with other THPs in the watershed will be significant. To allow fisher eventually to reconnect with fisher populations in northern California, patches of late seral forest must be retained to the north of areas presently occupied by the southern Sierra fisher population. *See* Exs. 1, 6-7. The removal of late seral elements such as large decadent conifers or black oaks, snags, and large downed logs within the forest means that these areas will not provide functional habitat for fisher for decades to come, thereby creating a habitat barrier for northward fisher expansion. Further, the THP does not provide any data to determine whether enough high canopy habitat will exist within the planning watershed for fisher. In combination with post-logging herbicide applications, SPI's plantations will lack both old forest habitat and a developed understory, thereby providing little to no habitat for fisher. *See* Exs. 1, 6-7.

### **c. Impacts to Mule Deer**

The Cow Camp THP, in combination with other similar THPs in the watershed that have used or intend to use herbicides, will have a significant impact on mule deer because it will eliminate early successional vegetative growth, which is critical to the health and survival of the herd. *See* Exs. 1, 3, 6, 9, 11.

Deer thrive on early successional habitats that are a product of disturbances that open up the forest and shrub canopy to allow grass/forb/shrub growth to occur. CDFG (1998.) Declining abundance of early successional vegetation communities in forestland is considered to have the greatest effect on long-term deer populations. Loss of early successional forage habitat is of particular concern for deer within the Central Sierra unit (which includes the deer occurring in this THP), which has been experiencing disturbing population declines. *Id.* Long-term trends in deer populations reflect the conditions of their habitat. Early successional habitat quantity/quality on forested lands influence these trends. *Id.*

In addition to their value as wildlife, deer offer recreational hunting opportunities and prey for large predators such as black bear and mountain lion. The further decline of deer populations in this area due to declining early successional habitat would be a potentially significant impact. *Id.*

The THP states that the area is not within the summer or winter range of the local mule deer herd but does lie within the "intermediate range" which is from 4,500 to 6,500 feet. This "intermediate range" is part of the early summer range for deer as they move upslope from their

winter range. *See* Ex. 6. This is a critical time for deer survival and thus the loss of valuable foraging habitat, particularly regrowing shrubs, is a significant impact that has not been addressed. *See* Exs. 1, 3, 6, 9. In addition, the THP contains no discussion of the loss of this habitat over time as this middle elevation habitat range is converted to even-aged plantations.

### **3. The THP Does Not Properly Assess Cumulative Impacts to Wildlife Habitat**

TR2.C addresses how the cumulative impacts of logging to biological resources must be evaluated. TR2.C states that “Biological assessment areas will vary with the species being evaluated and its habitat.” Factors to consider in the evaluation of cumulative biological impacts include “species requiring special element, sensitive species, and significant natural areas. Significant cumulative effects may be expected where there is a substantial reduction in required habitat or the project will result in substantial interference with the movement of resident or migratory species.” Significant factors that comprise the biological habitat condition include snags/den trees, hardwood cover, downed, large woody debris, late seral (mature) forest characteristics, multistory canopy and late seral habitat continuity. *Id.*

As discussed above, this THP, in combination with other THPs in the watershed that will utilize even-aged management followed by herbicide applications will have cumulative impacts on wildlife by substantially reducing the amount of this habitat, as well as early successional habitat relied on by prey species and by mule deer, within the assessment area. The THP states that there are no continuing significant adverse impacts from past land use activities that may add to the impacts of the proposed project. However, discussed in this comment letter, the past logging in assessment area has already had significant impacts by eliminating high quality habitat in the watershed. *See* Exs. 1, 4, 6, 8. Thus, any further loss of functional habitat for wildlife in the assessment area is significant.

The loss of valuable habitat throughout the middle elevation range of the larger Beaver Creek Watershed may have significant impacts not only because of the loss of habitat which precludes wildlife species from surviving in the area, but also because the loss of habitat creates the potential for this area to act as a barrier to wildlife movement. This is particularly true with for spotted owls and mule deer, which migrate up and down the greater Beaver Creek Watershed in an east-west direction, as well as fisher, which would need to be able to expand into this watershed in order to connect to important habitat areas to the north. Further, as discussed above, the THP does not account for late seral habitat connectivity, also required by the Forest Practice Rules. *See* Exs. 1, 4, 6, 8.

The THP’s chosen watershed assessment area also does not correspond to life histories of several species that must be evaluated on a larger scale that includes the dispersal and migratory range for the spotted owl, *see* Blakesley 2005b, Exs. 1, 4, 5, the migratory patterns of local mule deer, *see* Exs. 3, 6, 9, and the south to north expansion that experts believe is necessary to ensure long term survival for the Pacific fisher. Exs. 1, 6, 7. *See* TR2.C. The THP purports to have considered watersheds outside the assessment area, but no information is given about this analysis and a general review of the area shows that there are numerous other even-aged units

that have reduced habitat quality. *See* Ex. 8.

SPI relies on its Option A document as a tiering document for purposes of sustained yield in the Southern Forest District. Thus, CAL FIRE must consider the cumulative impacts of SPI's proposed conversion of its forest lands to even age systems within the area covered by the Option A and/or within the Area of Concern No. 5. Verner (1992) proposes that further habitat fragmentation in this area may lead to significant impacts to spotted owls - which would apply also to any other wildlife species (including the fisher) that relied on similar habitat. *See* Ex. 5, Technical Report, pp. 45-49. The loss of the habitat elements discussed above over the range of area covered by SPI's Option A would be significant. To the extent that SPI wishes to rely on its Option A document to claim that it will grow forests providing quality habitat for wildlife over time, CAL FIRE must assess the environmental impacts (not simply the sustained yield calculations) of the Option A document in a procedure compliant with CAL FIRE's certified regulatory program. *See* Pub. Res. Code 21080.5.

#### **4. The THP Does Not Consider Silviculture Alternatives that Would Avoid Significant impacts to Wildlife**

A THP is required to consider alternatives to the proposed action, particularly alternatives that could offset the potentially significant environmental impacts of a proposed logging. *See* Pub. Res. Code § 21002; 14 Cal. Code Reg. §§ 896(a); 898. Here, SPI and CAL FIRE do not consider a silviculture alternative to clear cutting/even-aged management that would retain greater amounts of residual habitat for wildlife use. In particular, SPI and CAL FIRE do not consider an alternative that would retain the largest, oldest trees on the landscape, as well as large, old oaks, patches of late seral habitat, adequate amounts of late seral habitat elements such as snags and downed woody materials, in a manner that achieved habitat connectivity for wildlife species requiring these habitat elements, as discussed above. The thinning prescription that comprises part of this plan does not meet these objectives since it does not retain these habitat elements and is subject to further treatments in the future.

In addition, SPI and CAL FIRE do not consider a timber operation alternative that does limits or forgoes the use of herbicides on sections of the THP area in order to avoid the loss of early seral habitat and naturally regenerating understory vegetation on even-aged managed plantations. *See e.g.*, Exs. 6, 11, 13.

#### **5. The THP Does Not Identify the Potentially Significant Impacts of Herbicides**

Herbicide applications are part of the THP project and the impacts of herbicide use must be analyzed by CAL FIRE as part of the THP. *See* Ex. 10. The THP does not provide any impact assessment regarding the potentially different herbicide uses that SPI could apply on this THP. SPI has applied herbicides on numerous THPs in Tuolumne County and thus the information already exists as to how SPI will foreseeably apply herbicides on this THP. *See* Exhibit 14. Soil conditions, vegetative conditions, etc are all well known to SPI yet SPI states it has no legal obligation to discuss the potential impacts of a wide range of herbicide applications

in this forest environment. Instead, SPI reserves the right to apply any of a number of herbicides, including highly toxic hexazinone, triclopyr and atrazine, through a variety of application methods, including helicopter spraying.

If SPI wishes to reserve the right to apply any herbicide through any manner of application, then CAL FIRE must analyze a series of potential herbicide use scenarios. For example, in the past CAL FIRE has stated that runoff potential of herbicides is not significant. However, how can CAL FIRE make that determination without knowing what the potential application method will be, what are the soil types, at what time of year will herbicides be applied? The law requires that either SPI propose a specific herbicide plan (which could be analyzed as part of the timber operations proposed in this project) or CAL FIRE must analyze the environmental impacts of all different scenarios on sensitive species, watershed resources and the natural vegetative community, which has evolved to respond to disturbance through a natural cycle of succession. For example, SPI claims to be saving oaks as part of this THP. However, if aerial spraying of herbicides is going to take place, SPI will have no ability to control whether oaks will be killed post-logging and prior to planting. If hand-spraying is conducted, SPI's contractors must be required to avoid oaks, otherwise the mitigation to avoid logging oak species becomes meaningless.

Further, SPI claims that normally herbicides will only be applied once in the life of a plantation. However, CAL FIRE acknowledges that herbicides may be applied up to three times on a single parcel. Evidence suggests that herbicides are routinely applied many times to a stand in the early years following conifer planting. *See* Exhibit 14. There is a potential for more significant impacts where herbicides are applied on more than a one-time basis. However, the THP does not state how often SPI will apply herbicides to native vegetation in the planning area, nor is there any analysis or resulting regulation that would prevent SPI from applying herbicides as often as they wished on the project site. As discussed above, the application of herbicides eliminates the early successional vegetative process in the Sierra, leading to a monoculture tree plantation lacking any structural diversity or understory composed of native species. *See* Ex. 13. The THP does not analyze the loss of this functional habitat, nor does it address the long term elimination of native plant species from the managed plantation due to the loss of seed banks over time. *See* Exs. 11-13. Native plant species are recognized as a valuable resource under California law, yet SPI's plantation system is designed to gradually eliminate these resources over time.

A highly sensitive species, the foothill yellow-legged frog, occurs in this watershed at this elevation and has declined in recent years in a manner that is correlated with pesticide exposure. *See* Davidson (2004). CAL FIRE has documented that pesticide drift from Central Valley agricultural applications have led to contamination of watersheds in the Sierra foothills. *See* Ex. 10. CAL FIRE has nevertheless claimed that herbicide impacts to this species will be insignificant. *Id.* However, the studies cited by CAL FIRE in its past responses show that even a temporary exposure to herbicides such as atrazine may lead to significant impacts due to abnormal development of larval frogs, *see* Hayes (2002), and SPI has in the past and intends in the future to apply atrazine to the forest environment. *See* Ex. 14. Further, CAL FIRE has in the

past not made any assessment of how this effect may combine with exposure to other pesticides that may occur in the frog's habitat due to pesticide drift. *See* Exs. 1 (discussion of amphibian impacts); 10 (letter from Regional Board and CDF OR.)

We do not agree with CAL FIRE's analysis that the application of herbicides is not foreseeable and request CAL FIRE to either 1) request that SPI propose a specific herbicide application plan to be reviewed as part of the THP or 2) conduct an impact analysis of herbicide use that would include all the potential scenarios that may be utilized by SPI, as required by law.

## **6. The THP Does Not Provide Adequate Information to Assess Impacts to Wildlife and Functional Habitat**

The THP does not provide enough information for the public to understand what the potential impacts will be from SPI's proposed THP. The THP provides no information regarding the overall habitat quality within the planning area. SPI has provided site-specific data that included information on average tree size in specifically delineated plots within the THP area. However the information was not complete and the THP provides no background data for either CAL FIRE or the public to assess the habitat quality that exists 1) in the area to be logged; and 2) in the planning and chosen assessment area. Such information would include the number of acres of high quality habitat (as discussed above) occurring within the planning area, the number of occurrences of late seral habitat components (as discussed above) within the planning area, and the amount of such habitat and habitat elements that will be removed by this THP and others like it in future years.

Further, the THP contains no analysis of the type of forest habitat that will be offered by SPI's timber plantations in the planning area and beyond over the course of the plantation cycle, nor any information about how old a plantation must be before it purportedly offers quality habitat to spotted owls, fisher or other wildlife species. SPI merely asserts that over time large trees will be produced by plantation forestry. This information is inadequate for the public or CAL FIRE to assess how high quality habitat and late seral forest elements will be retained on the landscape over time. The THP also provides no information about the environmental setting on SPI lands within its Option A area vis a vis the functional habitat elements discussed above, nor information on what the changes to those existing elements may be over time as SPI implements its Option A document.

The THP also does not discuss the record of SPI's past herbicide use in the County or in the township Sections in which this THP is located. The THP also does not disclose the full range of and frequency of herbicides applied by SPI on its forest lands in the County and in the area around this THP. *See e.g.*, Ex. 14. As discussed above, the THP does not provide either 1) a site specific herbicide plan that could be meaningfully evaluated by the public; or 2) an adequate analysis of the impacts from each of the potential scenarios for herbicide application that are proposed as part of this plan.

## **7. The THP Does Not Provide Adequate or Appropriate Visual Resources**

## Assessment and Mitigations

The Cow Camp THP admits that visual resources will have impacts on members of the public along cost share roads and from public lands. The mitigations of harvest method and retention of some trees provided in the THP are admitted by SPI to provide only “some” visual mitigation. The remainder of the mitigation is to be provided by two inadequate methods. The first is an assertion that “Professional Foresters” will “manage and encourage” quick growth of trees that will “quickly return the even aged harvest units to a shaded forest condition.” “Quickly” is then detailed to be within five years of reforestation. Ebbetts Pass notes the photos submitted by CSERC for this THP showing reforestation five years after harvest in Tuolumne and Calaveras Counties. It is hard to imagine the average layperson considering these degraded scenes as “shaded forest conditions.” Regardless of the skill of the Professional Forester, it is not realistic to believe that the regrowth in the Cow Camp THP area will reach the assertions of this THP. SPI proposes one further mitigation to keep the public from being subjected to visual impacts. That is to use existing gates, create more gates and “tank traps” “intended to limit public access and any consequential visual impacts.” This mitigation, which involves restricting the public’s use of SPI’s land, something set forth as possible on their website, and which restricts use of roads, some the only way to access public lands, is an unacceptable mitigation.

While SPI admits to visual impacts from their operations proposed for the Cow Camp THP, none of the mitigations proposed is appropriate or adequate. All proposed mitigations are out of compliance with the Z’Berg Nejedly Forest Practice Act, whose intent is to achieve maximum timber production “while giving consideration to values relating to recreation,...and aesthetic enjoyment.”

### **8. The THP Does Not Properly Assess Cumulative Impacts from Traffic and Noise.**

The Cow Camp THP does not properly assess cumulative impacts from traffic and noise. The THP fails to include CEQA-required information, or perform an adequate cumulative impacts assessment and discuss meaningful alternatives.

The THP only discusses the traffic and noise impacts of this particular project. The THP fails to assess the impact of this project in conjunction with other planned projects SPI will be conducting concurrently in the geographic area, all of which will impact Highway 4 and other logging haul routes. SPI's other planned projects (which have been outlined in Option A and other THPs approved or pending) in the geographic area will impact residents along Highway 4 and other logging routes.

- In CEQA, cumulative impacts produced by several projects are defined as “the change in the environment which results from incremental effect of the project when added to other closely related past, present, and reasonable foreseeable actions” (Section 15355). This means that the incremental impacts of the

individual project would be considerable when viewed in connection with the impacts of past projects, the impacts of other current projects, and the impacts of probable future projects (Section 15065(c)).

- To be adequate, a discussion of cumulative impacts must include the following elements:
  - Either (a) a list of past, present, and probable future projects including, if necessary, those outside the agency's control or (b) a summary of projections contained in an adopted general plan or related planning document, or in a prior adopted or certified environmental document, which described or evaluated regional or areawide conditions contributing to the cumulative impact provided that such documents are referenced and made available for public inspection at a specified location;
  - A summary of expected environmental impacts of individual projects, with specific reference to additional information stating where such information is available; and
  - A reasonable analysis of all cumulative impacts of the relevant projects, with an examination of reasonable, feasible options for mitigation or avoiding the project's contribution to such effects (Section 15130[b]).2)

None of these requisite elements of a CEQA assessment (for which a THP is a functional equivalent) are contained in the Cow Camp THP.

SPI's comment that the number of truck loads daily is "consistent with traditional traffic levels" is not substantiated by evidence or clarification. It is unknown what "traditional" means. Truck logging became common after World War II, so one would guess that the "traditional" timeframe is no more than 60 years. But is it 5 years? Ten years? Twenty years? The full 60 years? What are the "traditional traffic levels" and where is the documentation for it kept? There is no way to know and no documentation to allow the reviewer to judge the accuracy of SPI's assertion.

SPI further states that the plan will "generate approximately 40 loads a day." They also say the "loads per day may be as high as 85 when combined with other truck traffic using the same route." Are these 40 or 85 load one-way or round trips? Do the load trips include only log-hauling trucks or do they include other trucks, such as those hauling slash and debris to areas off-site? Is that the discrepancy between the 40 and 85 trips? Or are "other truck traffic using the same route" from different activities and projects?

The THP states that trucks can be expected to be in route as early as 4:00 am. Routinely logging trucks arrive in the Arnold/Avery area as early as 2:30 - 3:00 am in the summer. If SPI is

expecting a change from their past practices, their statement may be correct. If not, the THP should be corrected to say that SPI trucks could be in route through Avery/Arnold as early as 2:30 am and arrive in Big Trees as early as 3 - 4 am.

The mitigation measures proposed by SPI are inadequate and only address only a small portion of residences/tourists impacted by traffic and noise. Additionally, there are statements that appear to be inaccurate and need to be corrected in this section of the THP.

The THP says that “indiscriminate use of Jake Brakes will not be allowed and that empty trucks may not use their Jake Brakes in Big Trees Village”. The THP says that “Through the adherence to traffic laws, and the mitigation measures previously mentioned, there is not expected to be significant impacts as the result of the operations of this THP.

- SPI's proposed mitigation is inadequate because it fails to detail any method for reporting of problems from the public and fails to address how SPI will deal with lack of compliance with the use of Jake brakes. . There is not even a contact phone number provided to report violations of this rule and, to our knowledge, SPI has never previously been able to control logging trucks' use of Jake Brakes despite numerous calls from Supervisor Callaway and residents.
- It is unclear from SPI's statements if they intend that their “adherence to traffic laws” includes adhering to DOT standards for noise emissions. SPI needs to describe what measures it will be taking to ensure its trucks or contracted trucks comply with these and all other applicable noise standards.
- Due to general truck and Jake Brake noise impacts on campers in Sour Grass and Big Trees Campgrounds, truck operations need to be prohibited prior to 7 am or after 7pm.
  - Tourism is a critical industry for Calaveras County, responsible for at least a third of the county's revenue. Thousands of what SPI in the THP calls “temporary” campers come to the area each summer to recreate and, in so doing, spend money in the county. Many of these return repeatedly and many also eventually move permanently to the county, thereby also supporting the local economy.
  - Having their recreational experience damaged by early morning and late night noise from logging trucks coupled with the negative visual impacts of clearcuts and the frustration of being restricted from accessing recreational lands may drive these visitors away from the region prematurely or permanently. This is a potentially significant negative impact to the economy of Calaveras County that is minimized by SPI.
  - Again, SPI's proposed mitigations do not achieve the goals of the Z'Berg Nejedly Forest Practice Act, whose intent is to achieve maximum timber production “while giving consideration to values relating to recreation,...regional economic

vitality, employment, and aesthetic enjoyment.”

- Additionally, SPI’s assertion that logging trucks will be present in only the spring and summer appears to be incorrect. . This THP allows for winter logging operations. In fact, despite such assertions in earlier plans, in 2007 logging trucks were still seen on Board’s Crossing as late as Thanksgiving. This THP needs to correctly state that log-hauling and other logging-related trucks may be present in Big Trees Village and on other roads from March to the end of November, depending on weather conditions.
- As well, SPI needs to reveal whether or not logging trucks will be on the roads on weekends or after 7 pm.

This THP needs to be denied, among other reasons, until traffic and noise are properly assessed and mitigated.

#### **D. CONCLUSION**

We requests that CAL FIRE deny approval of this plan until SPI and CAL FIRE have adequately addresses the points raised above.

Sincerely,



Addie Jacobson  
(For Ebbetts Pass Forest Watch, Forest Ethics,  
Forests Forever, and the California Oak Foundation)

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**Exhibits:**

1. Excerpts from Framework documents dated January 2001 & FWS Consultation Dated January 11, 2001
2. Excerpts from Keystone Watershed Identification
3. 1998 DFG Deer Report
4. Comments from Doug Tempel
5. Selected Studies on California Spotted Owl
6. Comments from Tom Kucera
7. Selected studies and comments re Pacific Fisher
8. GIS Analysis of Beaver Creek Watershed Area with Maps & Declarations.
9. Comments from James Maddox
10. CAL FIRE Documents, Correspondence from Regional Board & DPR
11. Comments from John Sawyer
12. Selected Studies re Understory Vegetation, Prey Species and Herbicide Effects
13. Photos showing Plantation Units
14. Pesticide Use Summaries and Declarations
15. SPI Option A Document