



November 9, 2007

TO: Phil Detrich
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U.S. Fish and Wildlife Service
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RE: Comments on the Candidate Conservation Agreement with Assurances for Fisher for the Stirling Management Area between Sierra Pacific Industries and U.S. Fish and Wildlife Service

Please accept these comments on behalf of the Center for Biological Diversity and Sierra Forest Legacy concerning the proposed Candidate Conservation Agreement with Assurances (CCAA) for Fisher for the Stirling Management Area between Sierra Pacific Industries (SPI) and U.S. Fish and Wildlife Service (FWS).

We have reviewed the conservation agreement and have reached the following conclusions:

- 1) The agreement does not effectively promote conservation of the species, and FWS should deny the application. SPI's forest management practices do not provide adequate habitat for fisher, and the CCAA contains few actual protections for fisher or their habitat.
- 2) Evaluation of the agreement under FWS's Policy for the Evaluation of Conservation Efforts (Federal Register Vol. 68, No. 60, March 28, 2003, p. 15100) demonstrates that the agreement will not reduce the need for listing of the fisher as a threatened or endangered species.
- 3) We oppose the reintroduction of fisher onto SPI land. Neither the CCAA nor SPI policies provide enforceable protective measures for fisher. There is no evidence that habitat on SPI properties is adequate to meet the needs of fisher or that SPI properties contain the most suitable habitat in the northern Sierra Nevada for a reintroduction.
- 4) The CCAA, if implemented, should not preclude the federal listing of fisher under the Endangered Species Act.
- 5) The CCAA does not meet the criteria for a categorical exclusion under the Department of Interior's manual on implementation of the National Environmental Policy Act (516 DM 2)

1) Status, Habitat Requirements, the CCAA, and SPI Policies

Status

Historically, fisher occurred throughout the Cascade Mountains, Coast Ranges, and Sierra Nevada (Gibilisco 1994). Fisher range and abundance have been drastically reduced due primarily to logging of its habitat and past trapping (Powell and Zielinski 1994, Buskirk et al. 2002). In California, the fisher occupies only a small portion of its historical range with remnant populations limited to the southern Sierra Nevada, the Coast Ranges of northern California and southern Oregon and an introduced population in the southern Cascades (Zielinski et al. 1995, Carroll et al. 1999). Fisher population decline and fragmentation have reduced genetic diversity (Drew et al. 2003), and the fisher in its West Coast range is currently a candidate species for protection as a threatened species under the Endangered Species Act (Federal Register, 8 April 2004).

Habitat Requirements

Numerous studies on the habitat needs of fisher indicate that optimal habitat for the species is provided by late-successional forests, and that fisher preferentially use older forests over the early to mid-successional forests that result from timber harvest (Aubry and Houston 1992, Buck et al. 1994, Dark 1997, Jones and Garton 1994, Powell and Zielinski 1994, Rosenberg and Raphael 1986, Seglund 1995, Truex et al. 1998, Zielinski 1999). Fisher preferentially use late-successional habitat not only for resting and denning but also for foraging (Dark 1997, Jones and Garton 1994, Zielinski 1999). Dark (1997) found no differences between fisher resting locations and track-plate locations, potentially indicating that fisher use late-successional habitats for all activities, including resting, traveling and foraging.

Following a review of habitat associations of fisher, Buskirk and Powell (1994) concluded:

“Do American martens and fishers require particular forest types—for example, old-growth conifers—for survival? We think they do. Ecological dependency has been defined in terms of viability of populations, and distributional losses of marten and fisher populations in response to habitat change provide evidence that populations require the habitats that individuals, especially reproductive adults, behaviorally prefer.”

While fisher have occasionally been detected in younger forest stands, there is no evidence that these stands meet the habitat needs of fisher. Klug (1997) found no difference in age between stands where fisher were detected at track plate stations and where fisher were not detected and thus found no relationship between fisher and late-successional forests on private timber lands in coastal, northern California, but he noted that there was very little old-growth in his study area (<2%) and that track plate surveys are unable to detect whether or not fishers are using the area incidentally or regularly. Powell and Zielinski (1994) conclude:

“While some recent work in northern California indicates that fishers are detected in second-growth forests and in areas with sparse overhead canopy, it is not known whether these habitats are used transiently or are the basis of stable home ranges. It is unlikely that early and mid-successional forests, especially those that have resulted from timber harvest will provide the same prey resources, rest sites and den sites as more mature forests.”

Ruggiero et al. (1994) conclude:

“Large physical structures (live trees, snags, and logs) are the most frequent fisher rest sites, and these structures occur most commonly in late-successional forests. Until it is understood how these structures are used and can be managed outside their natural ecological context, the maintenance of late-successional forests will be important for the conservation of fishers” (p. 57).

Specific features of optimal fisher habitat include large trees, high structural complexity including snags and downed wood, high canopy closure, and few openings. Seglund (1995) found that fisher used rest sites with greater basal area per m², a greater average dbh of the four largest trees on the plot, a higher percentage of dead and down woody debris, and a greater number of vegetation layers than sites where fisher were not detected, all characteristics of late-successional stands.

Many studies have associated fisher with large diameter trees. The CCAA includes tables of the average diameter at breast height (DBH) of resting and denning locations for radio-collared fisher from studies in California and southern Oregon. The mean of the reported averages for rest sites (trees, snags, or logs) is 40.3” +/- 13.2” (median 38.8”, range 25.6” – 92.3”, n = 25 reported averages). Earlier studies not included in the CCAA reported the average DBH of rest sites in California as 45” (Buck et al. 1983), and 42” for live trees and 47” for snags (Seglund 1995). Zielinski et al. (2004) report that fishers in their study areas in the North Coast and the southern Sierra Nevada use the largest diameter trees available for resting, averaging 46.2, 47.2, and 27.2” for live conifers, conifer snags, and hardwoods, respectively. In the CCAA the mean of the reported averages for den locations (trees and snags) is 37” +/- 12.4” (median 36.5”, range 20.9” – 67.7”, n = 16 reported averages).

Truex et al. (1998) examined the attributes of forest stands surrounding fisher rest sites and reported the average dbh of the four largest trees in stands surrounding the sites as 18 - 47 inches. Other studies also indicate that stands surrounding denning and rest sites are typified by characteristics of old-growth forests, such as a predominance of large trees and snags, high canopy closure, and multiple canopy layers (Carroll et al. 1999, Dark 1997, Seglund 1995, Truex et al. 1998, Zielinski 1999).

In addition to large trees, fishers prefer habitats with complex structure:

“Buskirk and Powell (1994) hypothesized that physical structure of the forest and prey associated with forest structures are the critical features that explain fisher habitat use . . . Structure includes vertical and horizontal complexity created by a diversity of tree sizes and shapes, light gaps, dead and downed wood, and layers of overhead cover. Forest cover should have three functions important for fishers: structure that leads to high diversity of dense prey populations, structure that leads to high vulnerability of prey to fishers, and structure that provides natal and maternal dens and resting sites” (p. 53 Ruggiero et al. 1994).

Sites with higher amounts of downed logs and coarse woody debris and more structural complexity near the forest floor have more fisher detections than random sites (Klug 1997, Slauson et al. 2003, Weir and Harestad 2003). Complex structural diversity is associated with prey species richness and abundance and greater prey vulnerability to capture (Slauson et al. 2003, Buskirk and Powell 1994). Late-successional forests have higher structural diversity than younger stands. Page 8 of the CCAA states:

"Structures used for both denning and resting sites are typically more abundant (although low in density) in habitats with characteristics of older forests (large trees, large snags, and logs and associated pests and pathogens). The ecological processes typically associated with older forests such as disease, decay, tree mortality, and mechanical damage resulting in snags require time to develop larger diameter trees and microsites with the specific structural elements fisher use (Zielinski et al. 2004a, Yaeger 2005, Aubry and Raley 2006).

Fisher preferentially use areas with high canopy cover for resting, denning, and other activities:

“All habitats used disproportionately by fishers have high canopy closure, and fishers avoid areas with low canopy closure (Arthur et al. 1989b; Coulter 1966; Jones and Garton 1994; Kelly 1977; Powell 1977, 1978; Raphael 1984; Rosenberg and Raphael 1986; Thomasma et al. 1991, 1994)” (p. 53 in Ruggiero et al. 1994).

Zielinski (1999) reports that percent canopy cover and tree size are two of the most significant variables explaining differences between rest and random sites, and that fisher forage in stands with significantly higher canopy closure (92%) than other sites. Truex et al. (1998) examined the attributes of forest stands surrounding fisher rest sites and reported the average canopy closure in stands surrounding the sites as 88 - 94 %. Dark (1997) found that stands surrounding fisher rest sites had greater amounts of canopy cover (50-75%) than areas without fisher. Powell (1993) concluded that fisher select forests with low and closed canopies. Carroll et al. (1999) found a strong association between fisher and high canopy closure and large tree size class.

Published literature makes clear the relationship between fisher and closed canopy conditions:

"The fisher's need for overhead cover is very well-documented. Many researchers report that fishers select stands with continuous canopy cover to provide security cover from

predators (de Vos 1952; Coulter 1966; Kelly 1977; Arthur et al. 1989; Weir and Harestad 1997, 2003). Fishers may use forest patches with large trees because the overstory closure increases snow interception (Weir 1995a). Forested areas with higher density overhead cover provide the fisher increased protection from predation and lower the energetic costs of traveling between foraging sites. Fishers probably avoid open areas because in winter open areas have deeper, less supportive snow which inhibits travel (Leonard 1980; Raine 1983; Krohn et al. 1997), and because they are more vulnerable to potential predators without forest cover (Powell 1993). Furthermore, preferred prey species may be more abundant or vulnerable in areas with higher canopy closure (Buskirk and Powell 1994)" (p. 18774, 12 mo. Finding).

Numerous papers have concluded that fisher generally avoid openings and nonforested areas (Arthur et al. 1989; Buck et al. 1983, 1994; Buskirk and Powell 1994; Coulter 1966; Dark 1997; Earle 1978; Jones 1991; Jones and Garton 1994; Kelly 1977; Powell 1977, 1978, 1993; Rosenberg and Raphael 1986; Roy 1991; Seglund 1995). The habitat available for fisher on managed timberlands is necessarily discontinuous and of questionable value for fisher:

“In the western mountains, fishers prefer late-successional forests (especially for resting and denning) and occur most frequently where these forests include the fewest large nonforested openings. Avoidance of open areas may restrict the movements of fishers between patches of habitat and reduce colonization of unoccupied but suitable habitat. Further reduction of late-successional forests, especially fragmentation of contiguous areas through clearcutting, could be detrimental to fisher conservation” (p. 57 Ruggiero et al. 1994).

Even small openings can affect fisher movements, and clearcuts are known to be detrimental to fisher:

“Fishers have avoided open areas 25 m across and less in the Midwest (Powell 1977). Large forest openings, open hardwood forests, recent clearcuts, grasslands, and areas above timberline are infrequently used in the West . . . Aversion to open areas has affected local distributions and can limit population expansion and colonization of unoccupied range (Coulter 1966, Earle 1978)” (p. 55, Ruggiero et al. 1994).

Optimal fisher habitat is provided by contiguous forest:

"A number of studies have shown that the fisher avoids areas with little forest cover or significant human disturbance and conversely prefers large areas of contiguous interior forest (Coulter 1966; Kelly 1977; Buck 1982; Mullis 1985; Rosenberg and Raphael 1986; Arthur et al. 1989a; Powell 1993; Jones and Garton 1994; Seglund 1995; Dark 1997). Rosenberg and Raphael (1986) assessed forest fragmentation in northwestern California and its effect on fishers. Their study shows a significant positive association with a plot's distance to a clearcut, and significant negative associations with a stand's length of edge,

degree of insulation (defined as "the percentage of its perimeter that was clearcut edge"), percent clearcut, and total edge" (p. 18774, 12 mo. Finding).

The fisher is known to be sensitive to human disturbance and to avoid areas of human activity (Douglas and Strickland 1987, Powell 1993, Seglund 1995, Dark 1997). Seglund (1995) found that a majority of fisher rest sites (83 %) were further than 100 m from human disturbance and Dark (1997) found that fishers used and rested in areas with less habitat fragmentation and less human activity.

In sum, fishers are habitat specialists associated with forests with late-successional features. Fishers utilize stands with specific characteristics for resting and denning such as large trees, snags, and logs, coarse woody-debris, dense canopy closure and multiple-canopy layers, and few openings (Powell and Zielinski 1994; Seglund 1995; Dark 1997; Truex et al. 1998; Aubry et al. 2002; Carroll et al. 1999; Mazzoni 2002; Zielinski et al. 2004). Fishers prefer to rest in areas with continuous canopy and a diversity of structural features (Zielinski et al. 2004). Re-use of rest and den sites is low so suitable resting structures need to be interconnected and widely distributed throughout the home range (Powell and Zielinski 1994; Truex et al. 1998, Campbell et al. 2000). Fishers avoid areas of human disturbance and are highly sensitive to anthropogenic habitat loss and fragmentation related to timber harvest.

The CCAA and SPI Forest Management Practices

Optimal fisher habitat is provided by large blocks of contiguous and interconnected late-successional forest with a high level of structural diversity, high canopy closure, large trees and snags, and few openings. This habitat description does not match the habitat that SPI is offering to provide for fisher. Rather than reviewing the literature and prescribing habitat requirements for fisher, the CCAA leaves the definition of suitable fisher habitat to SPI and does not prohibit any activities in this habitat. SPI does not agree to change their management practices to benefit fisher or to curtail timber harvest or other activities within said fisher habitat. Under the CCAA, SPI is agreeing only to continue following their existing forest management guidelines, not to alter them to improve conditions for fisher. The agreement states only that a certain percentage of SPI trees will be at a certain age class by the end of the 20 year agreement; it does not require specific areas or specific features and it does not preclude harvest as soon as the trees reach a certain age. In essence, SPI is offering only to let their trees grow in accordance with current practices, which means until they reach a harvestable age, and claiming that this will improve the status of fisher.

FWS did not create specific conservation measures for fisher that must be followed under the CCAA. Instead, they allowed SPI to develop their own conservation measures, and even these self-imposed measures are not required by or formally included in the CCAA:

- "SPI implements a suite of management practices and policies that are not included as conservation measures within this CCAA, but are expected to benefit fisher, should they reoccupy the enrolled lands. These management practices and

policies will provide a range of seral stages across the enrolled lands, which will provide an increasing trend in additional support for use by fisher, during but primarily after the 20-year life of this CCAA" (p. 12 CCAA).

- “The following additional conservation benefits beyond the conservation measures may occur with the completion of the CCAA: Management practices implemented by SPI as corporate policy are expected to maintain and provide for structures (hardwoods, snags, trees with cavities, and down logs) and other habitat characteristics that are also believed to be essential for maintaining fishers on the enrolled lands beyond the time period of the permit” (EAS p. 2).

The CCAA does not oblige SPI to maintain trees of a specific size or define a specific required acreage for larger trees to provide fisher habitat. The CCAA says only that SPI will follow their existing forest management policies, under which they define fisher habitat (“Lifeform 4”) as including a minimum average of 9 - 20 trees per acre at least 22 inches dbh (p. 13 CCAA). This size class (22 in.) is obviously smaller than the literature values reported above (average 37 - 47 in.), and thus the size class of trees that SPI is willing to provide for fisher is much smaller than the size actually used by the species for resting and denning.

Although the CCAA acknowledges that the fisher is dependent on structures such as snags and downed wood, the agreement does not mandate that SPI provide snags and downed wood. The CCAA says only that SPI will adhere to their own guidelines but these guidelines do not require that a certain number of snags or downed wood be retained for use by fisher.

Numerous studies report that fisher prefer areas with a high percentage of canopy cover, but the CCAA does not dictate that a specific percentage of cover be retained for fisher and again defers to SPI guidelines. Under SPI practices, fisher habitat is defined as areas with a canopy closure of 60% or greater, which is lower than the reported literature values preferred by fisher.

The fisher depends on contiguous forested habitat, but the CCAA does not limit clearcutting on the enrolled lands, and does not call for large continuous areas of late-seral trees for fisher. The CCAA defers to SPI management practices, but SPI does not agree to provide contiguous habitat for fisher of a certain size or age class. Neither the CCAA nor SPI policies guarantee that a large area of contiguous forest will be available for fisher. Under SPI policy, regeneration units can be up to 40 acres in size and can be grouped together “to eventually provide contiguous larger habitat patches of generally the same age and structure class to benefit wildlife species" (p. 13 CCAA). Although the company claims that larger patches will eventually provide wildlife value, the reality is that larger blocks of open areas are created, and that once the trees have reached a certain size, they will be harvested. The 12 Month Finding for fisher points out that habitat on logging lands under conservation strategies generally does not meet the habitat needs of fisher:

“The HCP conservation strategies generally do not provide the large blocks of forest with late seral structure that appear to be important for sustaining resident fisher populations, particularly for providing denning and resting sites” (p. 18789).

The CCAA does not prohibit activities known to be detrimental to fisher:

“Habitat fragmentation is a concern (for fisher). Clearcutting, selective logging, and thinning change the suitability of fisher habitat by removing overhead cover and insulating canopy, exposing the site to the drying effects of sun and wind (Buck et al. 1994) or to increased snow deposition, removing prime resting and denning trees, and increasing exposure of the fisher to predators” (12 Mo. Finding p. 18780).

The CCAA does not limit any timber harvest activities on the enrolled lands, even though it is known that timber harvest has contributed to fisher declines:

“The Northwest Forest Plan states that fisher populations are believed to have declined on Federal lands in old-growth habitat for two primary reasons: (1) Loss of habitat due to forest fragmentation resulting from clearcutting, and (2) the removal of large down coarse woody debris and snags from the cutting units (USDA Forest Service and USDI BLM 1994)” (12 Mo. Finding p. 18772).

"The extent of past timber harvest is one of the primary causes of fisher decline across the United States (Powell 1993), and may be one of the main reasons fishers have not recovered in Washington, Oregon, and portions of California as compared to the northeastern United States (Aubry and Houston 1992; Powell and Zielinski 1994; Lewis and Stinson 1998; Truex et al. 1998). Timber harvest can fragment fisher habitat, reduce it in size, or change the forest structure to be unsuitable for fishers. Habitat fragmentation has contributed to the decline of fisher populations because they have limited dispersal distances and are reluctant to cross open areas to recolonize historical habitat" (12 Mo. Finding, p. 18779).

SPI is not agreeing to change their operating policies, which include clearcutting and even-aged forest management, to benefit the fisher. Both of these practices are known to decrease habitat value for fisher:

“Large clearcuts and numerous, adjacent, small clearcuts of similar age should seriously limit resting and foraging habitat for fishers during the winter. This, in turn, may limit fisher population size. The effect of uneven-aged timber management practices on fisher habitat have not been studied but are likely to have less effect on fisher habitat than even-aged management. Forestry practices aimed at maximizing wood production and minimizing rotation times will probably have detrimental effects on fisher populations” (p. 64 Ruggiero et al. 1994).

The CCAA does not contain any specific prescriptions for fisher habitat, and does not limit any activities on the enrolled lands. SPI is agreeing only to go about business as usual, and is claiming that this will provide habitat for fisher. In the absence of regulations that would actually provide for species protection on the enrolled lands, it is highly unlikely that the CCAA will benefit the fisher.

2) The Policy for the Evaluation of Conservation Efforts

FWS has developed a policy for consideration of whether conservation efforts forestall the need for listing (Policy for Evaluating Conservation Efforts, Federal Register, Vol. 68, No. 60, March 28, 2003, p. 15100), which considers two primary factors: (1) “the certainty that the conservation effort will be implemented” and (2) “the certainty that the conservation effort will be effective.” Under each of these factors, FWS determines whether the agreement is sufficient based on a number of specific criteria. We have evaluated the agreement under these criteria and determined that it clearly does not forestall the need for listing. We examine applicable criteria below:

A. The certainty that the conservation agreement will be implemented:

1. The conservation effort, the party(ies) to the agreement or plan that will implement the effort, and the staffing, funding level, funding source, and other resources necessary to implement the effort are identified.

The CCAA does not identify a staffing level, funding level, or funding source to implement the agreement. SPI does not agree to commit funds or staff time to the preservation of fisher on their lands. Committing resources to implement the effort would include setting aside large areas of undisturbed late-successional forest on the enrolled lands for use by fisher and agreeing not to harvest these areas, but SPI does not make this commitment. They make no commitment to curtailing timber harvest or other destructive activities on the enrolled lands.

5. The type and level of voluntary participation (e.g., number of landowners allowing entry to their land, or number of participants agreeing to change timber management practices and acreage involved) necessary to implement the conservation effort is identified, and a high level of certainty is provided that the party(ies) to the agreement or plan that will implement the conservation effort will obtain that level of voluntary participation (e.g., an explanation of how incentives to be provided will result in the necessary level of voluntary participation).

Although SPI is voluntarily entering into the CCAA, they are not volunteering to change their forest management practices to benefit fisher conservation, and they do not identify acreage that will be set aside for fisher conservation. Under the agreement, SPI is only agreeing to follow their current practices, not alter them:

“The Stirling Management Area is currently being managed under SPI’s State approved Option A forest management plan. This CCAA does not propose to alter the existing management of these forestlands beyond the commitment to the

conservation measure proposed” (EAS p. 6).

6. Regulatory mechanisms (e.g., laws, regulations, ordinances) necessary to implement the conservation effort are in place.

Regulatory mechanisms necessary to implement the conservation effort are not in place. The CCAA does not contain any regulations requiring SPI to protect the fisher. The agreement is entirely voluntary:

- “The CCAA enhances both the maintenance and recovery of fishers by encouraging SPI to *voluntarily* maintain and increase denning/resting habitat” (EAS p. 3, emphasis added).
- “In return for *voluntary* conservation commitments, the CCAA will extend assurances to the landowner that will allow future alteration or modifications of the enrolled property that are in accordance with the agreed upon conservation measures” (EAS p. 2).
- "In accordance with the ESA regulation 50 CFR 17.32(d)(5) and through this CCAA, the FWS provides Sierra Pacific Industries assurances that no additional conservation measures or additional land, water, or resource use restrictions, beyond those *voluntarily* agreed to and described in this CCAA, will be required should the fisher become listed as a threatened or endangered species for the duration of the permit period." (p. 18 CCAA).

There are no regulatory mechanisms in the CCAA that guarantee protections for fisher or fisher habitat. The CCAA does not require SPI to maintain a specific acreage of habitat for fisher, does not specify the characteristics of fisher habitat, and does not limit the activities that SPI can conduct in fisher habitat, including clearcutting. The CCAA does not impose regulations to protect the fisher, even though it is known that existing regulations are insufficient to protect the species:

"Existing regulatory processes for non-Federal, non-Tribal timberlands in California and Washington do not include specific measures for management and conservation of fishers or fisher habitat. Regulations regarding late successional forest rarely provide protection of these forests on commercial timberlands. This is largely because the regulations lack specific and enforceable conservation measures for these forests, and for most unlisted wildlife species, including the fisher" (12 Mo. Finding, p.18789).

7. A high level of certainty is provided that the party(ies) to the agreement or plan that will implement the conservation effort will obtain the necessary funding.

The CCAA does not identify the level of funding necessary to implement the agreement and does not require SPI to provide funding. As a corporation, SPI is necessarily profit driven and is not committed to providing habitat for fisher when providing that habitat would interfere with its profits.

B. The certainty that the conservation effort will be effective:

1. The nature and extent of threats being addressed by the conservation effort are described, and how the conservation effort reduces the threats is described.

Section VIII of the CCAA discusses threats addressed by the agreement including risk of extinction due to the isolation of small populations, habitat loss due to timber harvest and other activities, and the loss of resting and denning habitat and structures (p. 12). The agreement proposes to reduce the threat of genetic isolation by providing habitat in an area where fisher were formerly located that could potentially provide connections between other fisher populations. If the enrolled habitat were capable of supporting fisher, and if there were habitat corridors between the enrolled properties and existing fisher populations, then it could potentially aid in connecting isolated populations. As discussed above, however, the proposed habitat is not optimal for fisher, and there is no indication that it is the most suitable habitat in the Northern Sierra Nevada for a reintroduction effort, as will be discussed in greater detail in the next section.

The CCAA does not describe how the agreement will reduce the threat of timber harvest, one of the biggest threats to fisher (reviewed in 12 Mo. Finding). Under the CCAA, timber harvest is not limited nor are other habitat-destroying activities. SPI is not agreeing to set aside any habitat for fisher and they are not agreeing to curtail any activities on their land. Under the agreement all of the following activities are permitted in the enrolled area: felling and bucking timber, yarding timber, loading and landing operations, salvage of timber, transport of timber and rock, road construction and maintenance, rock pit construction and use, site preparation, tree planting, vegetation control, pre-commercial thinning and pruning, minor forest products, grazing, and fire suppression (CCAA p. 4). All of these activities threaten fisher and fisher habitat, but SPI is not committing any acreage to removal from anthropogenic disturbance.

Although habitat loss is identified as a threat, SPI is not agreeing to avoid take via habitat reduction and/or the incidental felling of den trees. SPI is not committing to avoid activities that would directly kill fisher on their property even if fisher were known to be there:

"Take may result from (1) disturbance to pregnant or nursing female fishers during the early denning season, (2) cutting down a den tree containing a late term pregnant fisher or fisher kits, (3) reduction in the amount of habitat to a level that significantly impairs a fisher's ability to breed, feed, or shelter, and (4) fisher mortality caused by vehicle traffic associated with otherwise lawful activities. This take will be in the form of harm, harass, wound, and kill, as defined in the ESA section 3 . . . Probability of take is expected to be limited to road kill or habitat reduction (1 every 5 years; 3 total) and the incidental felling of 1 den tree (per 1 or 2 above) (containing 1 female and 2 kits; 3 total)" (p. 16 - 17).

SPI agrees to notify FWS of activities that could lead to known take of fisher, but they do not agree to forego the activities in order to protect the fisher:

"Sierra Pacific Industries, to the extent they can determine an actual potential take is going to occur, agrees to provide the FWS with an opportunity to rescue individuals of the covered species before any authorized take occurs. The FWS will be notified at least 30 days in advance of the activity that would cause such a take" (p. 20 CCAA).

The Environmental Action Statement (EAS) prepared under a categorical exclusion acknowledges that forest management activities pose threats to fisher on the enrolled lands, but the CCAA does not prohibit any activities on the lands or require that any habitat be set aside for fisher, upholding that merely increasing rotation time will benefit fisher:

“Controversy does exist over the environmental effects that may occur from forest management of the enrolled lands. Continuation of forest management on the enrolled lands is expected to occur regardless of approval and implementation of the proposed CCAA and issuance of the Permit. However, the conservation measures in the CCAA are a commitment by SPI to increase the amount of mature and mid-mature forest on the enrolled lands over the 20-year period of the permit. Thus, the conservation measure could serve to reduce controversy regarding the retention of forest characteristics important to fishers” (EAS p. 5).

Based on the complex habitat needs of fisher as reviewed in the habitat section above, merely increasing stand rotation time is unlikely to meet the habitat needs of fisher.

The CCAA identifies loss of resting and denning habitat as a threat posed to fisher by forest management activities, and claims that because more acreage will be allowed to reach an older age before being harvested, the threat will be reduced:

"Threats exist to a landscape's ability to support fishers if current forest management activities substantially reduce the amount or quality of resting and denning habitat. However, on the enrolled lands as discussed below, SPI proposes to increase the amount of resting and denning habitat during the 20-year time period of this agreement" (p. 12).

“On the enrolled lands, the primary risks to existing and future fisher habitat are the loss of denning/resting habitat due to forest management activities. The implementation of SPI's Option A plan and other company policies will allow trees to grow larger before harvest than required under the California FPRs. In addition, the applicant's snag management and habitat retention areas within units will provide an increasing trend in forest structural elements important to fishers during, and primarily after the 20-year life of this CCAA” (EAS p. 6).

The CCAA does not set requirements for snags and downed wood or habitat retention areas, deferring instead to SPI policies, which are inadequate for fisher, voluntary, and not enforceable. Based on fisher biology, e.g., preference for closed canopy, large areas of contiguous undisturbed forest, and reluctance to cross clearcuts and open areas, merely agreeing to let trees grow older before harvest is of dubious actual benefit to the species.

In sum, the provisions of the conservation agreement do not effectively reduce the threats facing the species.

2. Explicit incremental objectives for the conservation effort and dates for achieving them are stated.

The CCAA does not include explicit incremental objectives or dates for achievement. The agreement states only that as the forest on the enrolled lands grows older, it may provide suitable habitat for the fisher:

“(The agreement) contributes to recovery of fisher denning/resting habitat by moving the enrolled SPI forestlands to a condition that supports more denning/resting habitat for the fisher than that which exists today” (EAS p. 2).

3. The steps necessary to implement the conservation effort are identified in detail.

The steps necessary to implement the conservation effort are not identified in detail. The agreement basically lacks implementable provisions.

4. Quantifiable, scientifically valid parameters that will demonstrate achievement of objectives, and standards for these parameters by which progress will be measured, are identified.

The agreement does not contain quantifiable scientifically valid parameters that would demonstrate achievement of objectives or standards by which progress will be measured. Rather, the agreement states:

“The maintenance and growth of denning/resting habitat is expected to enhance the fisher’s ability to successfully re-occupy the enrolled lands. Over the 20-year period of the agreement there will be a net increase in the amount of fisher denning/resting habitat on the enrolled lands from the current amount of approximately 23% to approximately 33% of the total enrolled acreage” (EAS p. 1).

This provision falls short for several reasons. Given that it runs counter to virtually all of the peer-reviewed science on fisher habitat requirements, it is unclear that SPI’s definition of habitat is valid and thus that they will meet their goal of increasing habitat by 10%. Moreover, although the CCAA acknowledges that resting and denning structures are key to habitat suitability, the agreement does not propose to measure or quantify their distribution across the landscape. Rather, SPI claims they are providing resting and denning structure simply by increasing the distribution of stands predominated by trees over 22” dbh. Given that resting and denning trees are generally considerably larger than 22” and have deformities that take substantial time to develop, this provides little guarantee that habitat will actually be suitable. Finally, the CCAA fails to provide any measure of fisher use of or survival in the area, which would be the obvious test for the success of the CCAA.

5. Provisions for monitoring and reporting progress on implementation (based on compliance with the implementation schedule) and effectiveness (based on evaluation of quantifiable parameters) of the conservation effort are provided.

Under the CCAA SPI agrees to submit an annual report and a five, ten, and fifteen-year report. They agree to report the changes in acreage of fisher habitat every five years and to monitor for colonizing fisher every five years. The CCAA does not include details of the pending reintroduction of fisher onto SPI land so it is difficult to comment on the adequacy of reintroduction monitoring since it is not included in the agreement. The draft reintroduction plan (not part of the CCAA) calls for fisher to be placed onto SPI lands on an annual basis. If this were to be the case, then monitoring on a five year basis would not be adequate.

3) The Reintroduction

Although we support the reintroduction of fisher into appropriate habitat in the northern Sierra Nevada, we oppose the reintroduction of fisher onto SPI land. Neither the CCAA nor SPI policies provide enforceable protective measures for fisher. There is no evidence that habitat on SPI properties is adequate to meet the needs of fisher or that SPI properties contain the most suitable habitat in the northern Sierra Nevada for a reintroduction. It will not promote fisher conservation to reintroduce the species into an area from which they were extirpated without addressing the causes of extirpation, namely timber harvest. It is known that timber harvest contributed heavily to fisher decline and that younger forests are generally inadequate to meet the species needs (reviewed in 12 Mo. Finding). Zielinski et al. (2005) hypothesized that the modern absence of fishers from the northern and central Sierra Nevada was due to timber harvest and forest management practices that reduced late-seral montane forest area from 50% of the region in 1945 to less than 5% in 1996. Ruggiero et al. (1994) conclude:

“It is our opinion that the precarious status of the fisher population in Washington and Oregon is related to the extensive cutting of late-successional forests and the fragmented nature of these forests that still remain. Fishers appear sensitive to loss of contiguous, late-successional Douglas fir-forests in the Pacific Coast Ranges, west slope of the Cascade Range, and west slope of the Sierra Nevada (Aubry and Houston 1992; Gibilisco 1994; Raphael 1984, 1988; Rosenberg and Raphael 1986) . . . We suspect that in Douglas fir forests, late-seral conditions provide the physical structure that allows fishers to hunt successfully and to find suitable resting and denning sites. Young, second-growth forests may be unable to provide these requirements” (p. 65).

The Federal Register notice for the CCAA acknowledges the detrimental effects of timber harvest on fisher:

“The extent of past timber harvest has been identified as one of the potential causes of fisher decline. Timber harvest has contributed to the loss of habitat, habitat fragmentation, and population isolation, which are current threats to the fisher. Removal

or modification of mature and late-successional forest from large portions of the Sierra Nevada and Pacific Northwest has likely contributed to the significantly diminished distribution of fishers, within their historic range on the west coast” (Federal Register, Vol. 72, No. 195, October 10, 2007).

The CCAA acknowledges that timber harvest activities led to fisher declines:

"The extent of past timber harvest is one of the primary causes of fisher decline across the United States (Powell 1993), and has been suggested as one of the main reasons fishers have not recovered in Washington, Oregon, and portions of California (Aubry and Houston 1992, Powell and Zielinski 1994, Lewis and Stinson 1998, Truex et al. 1998)" (p. 12 CCAA).

Despite these acknowledgements, FWS and California Department of Fish and Game are moving forward with reintroduction to an area with very little of the forest structures typical of fisher habitat and where even-aged management primarily using clearcutting predominates.

There is no evidence that SPI lands can sustain a population of fisher or that private timber land is the best place for a reintroduction effort. Bias and Gutierrez (1992) found that private lands in an area of checkerboard ownership within the Eldorado National Forest were generally depauperate of large trees and snags and other characteristics typical of late-successional forests and high quality fisher habitat. Similarly, when mapping fisher use areas on the Eldorado National Forest, Bombay and Lipton (1994) assumed that private lands “would not provide suitable habitat for fisher or marten into the future.” Beardsley et al. (1999) found that less than 9% of private forest lands in the Sierra Nevada have a mean stand diameter greater than 21” dbh and that less than 2% can be classified as old-growth.

Reintroduction in the Sierra Nevada should be based on a habitat assessment of all of the potential lands. There is no evidence that SPI lands are the most suitable site for a Sierra Nevada reintroduction, and there is no evidence that SPI lands are capable of supporting fisher. Further, there are no enforceable habitat protections for fisher on SPI lands in the CCAA. Given the unsuitability of habitat on SPI land for fisher, that no activities on this land are prohibited in the CCAA, and that there is a guaranteed level of human disturbance due to timber harvest and other forest management activities, it would be irresponsible to relocate fisher onto SPI property without further study and enforceable protections for the species and its habitat. The CCAA EAS acknowledges the risk involved in reintroduction onto SPI land:

“The experimental reintroduction proposed by CDFG does contain an amount of uncertainty of the feasibility of the release areas to support a reintroduced population of fishers” (EAS p. 7).

Without a detailed GIS analysis of habitat connectivity between populations, reintroduction of fisher onto SPI land is likely to fail. Fisher have low reproductive rates, limited dispersal ability, and are reluctant to cross open spaces (Coulter 1966; Kelly 1977; Powell 1977; Buck et al. 1994;

Jones and Garton 1994). These factors make fisher populations prone to localized extirpation and slow to recover from deleterious impacts and "isolated populations are therefore unlikely to persist" (12 Mo. Finding, p. 18791).

The reintroduction effort should include input from scientists, conservation organizations, and other interested parties, and should be based on a scientifically valid habitat assessment. Because the fisher is imperiled in the West, before individuals are relocated, every effort should be made to ensure that the reintroduction will be successful. To ensure success, the reintroduction effort should include the Fisher Biology Team, a group of state and federal agency representatives from CA, OR, WA and British Columbia, and should be open to public input. Because the reintroduction will be funded with tax-payer dollars, the public should have the right to comment on the process. Furthermore, if public lands in the target area have suitable habitat for fisher, potentially in the Lassen or Plumas National Forests, then reintroduction onto public land would be preferable to reintroduction onto timber industry property.

The Olympic Peninsula reintroduction effort could provide insight for the Sierra Nevada. The Olympic Peninsula plan was based on a study undertaken by the Washington Department of Fish and Wildlife in partnership with Northwest Ecosystem Alliance, and was lead by a team of scientists with expertise in fishers, carnivores, genetics and Geographic Information System habitat analysis. It included a feasibility assessment based on the adequacy, amount, and configuration of available fisher habitat and prey (Lewis and Hayes 2004).

In sum, a thoughtful and responsible reintroduction effort would include a detailed analysis of habitat suitability and connectivity, and would identify and eliminate threats to the species by including enforceable habitat protections, such as limitations on timber harvest and other activities in fisher habitat. The imminent reintroduction of fisher onto SPI by CDFG does not include these elements and jeopardizes current and future fisher conservation efforts. It is likely to be harmful to individual fisher, and a failed endeavor will make it harder to gain public approval for future efforts.

4) Federal Listing

Currently the fisher is a candidate species for protection under the ESA. The implementation of the CCAA between SPI and FWS should not preclude the federal listing of fisher. There is a high degree of uncertainty for the implementation and effectiveness of the agreement. The agreement contains no actual protections for fisher, does not prohibit any activities in fisher habitat, and is unlikely to effectively contribute to the conservation of the species. The CCAA encompasses only a small portion of the fisher's historical range, and even if the enrolled properties were capable of supporting fisher, the species would still qualify as threatened or endangered throughout a significant portion of its former range. Therefore the signing of the agreement should not preclude the species' federal listing.

5) The CCAA does not meet the criteria for a categorical exclusion under the Department of Interior's manual on implementation of the National Environmental Policy Act (516 DM 2)

In their EAS, FWS asserts that the CCAA meets the criteria for a categorical exclusion (CE) under the National Environmental Policy Act in that it will not have significant environmental effects. For a multitude of reasons, this claim is unsupportable and should FWS wish to finalize the CCAA, they should prepare an environmental impact statement or at the very least an environmental assessment. The CCAA is interrelated to a potential introduction of fisher onto SPI lands, while at the same time will allow take of fisher under SPI's even-aged forest management practices, which are unlikely to maintain fisher habitat or be conducive to fisher survival and recovery. The reintroduction and forest management practices both have potential significant effects on the environment and potentially preclude reintroductions of fisher to other more suitable lands or natural recolonization of the area by fisher. These facts clearly indicate the CCAA has significant environmental effects. Moreover, the CCAA does not fit any of the actions described as qualifying for a CE and meets at least four of the extraordinary circumstances that would disqualify it for a CE (516 DM 2, appendices 1 and 2).

The CCAA will have significant affects on the environment

As discussed above, the CCAA requires very little of SPI, allowing them to continue with even-aged forest management practices that have led to the complete elimination of old-forest characteristics from nearly all of their lands to the detriment of the fisher and every other wildlife species that depends on old-forest characteristics. SPI is not committing to protect any forest habitat for fisher, including any forests that should become occupied by fishers. Rather, they are committing to manage their lands on 80 year rotations and after the 80 years to cut them down regardless of the presence of fishers. FWS in granting the CCAA is giving SPI a permit to take fisher that may be reintroduced or that may recolonize the area naturally or through introductions on nearby lands. FWS is thus foreclosing restrictions on SPI that may provide more stringent and effective regulations once the fisher is formally listed as a threatened species and should it become established on SPI lands.

In the EAS, FWS argues: “[s]ignificant cumulative effects are not expected to occur as a result of the CCAA and issuance of the Permit” because the CCAA will “maintain or increase the amount of fisher denning/resting habitat (mid-mature to mature forests) over the 20-year permit period.” However, permitted activities under the CCAA also include logging of fisher denning/resting habitat, including potentially occupied fisher habitat, with obvious significant cumulative effects. The CCAA issues a permit to continue these practices. This permit will allow SPI to continue to log unoccupied and future occupied fisher habitat when the fisher is listed. The practices described in SPI's Option A alternative have myriad significant effects on the human environment and because FWS is permitting these very actions, they must analyze these effects under NEPA in an environmental impact statement.

The EAS appears to imply that they can delegate analysis of these cumulative effects to the state of California, stating:

“the FPRs in California require the completion of a Cumulative Impacts Assessment for each THP (project). Environmental values and resources that must be considered and reviewed as part of the THP preparation process include watershed, soil productivity, biological, recreation, and visual.”

We, however, know of no authority that allows FWS to opt out of NEPA analysis for a permit they are issuing because there is a corresponding analysis conducted at the state level. To the contrary, the above statement implies that there will be significant cumulative effects from the actions allowed under this permit that should be analyzed under NEPA.

The CCAA has significant effects because it is interrelated with plans to reintroduce the fisher to SPI lands. Reintroducing fisher to SPI lands may foreclose options for reintroducing the fisher to other and likely more suitable portions of their range in the Sierra and elsewhere by depleting the stock of animals available for reintroductions. It may also preclude natural recolonization of the area by fisher from the southern Sierra Nevada that may potentially be more locally adapted to habitats in the area. All of these factors and others deserve serious consideration under NEPA.

The CCAA does not fit any of the actions described as qualifying for a CE

The Department of Interior’s manual on NEPA implementation lists “categories of actions” that are categorically excluded, which primarily includes “personnel actions,” “internal organizational changes,” “routine financial transactions,” “departmental legal activities,” and others of a similar nature (516 DM 2, appendix 1). These actions generally involve internal bureaucratic decisions with little possibility of an impact on the environment and are thus categorically different than the CCAA. As such, the CCAA does not qualify for a categorical exclusion.

The CCAA meets at least four of the extraordinary circumstances that would disqualify it for a CE

Even if the CCAA did somehow qualify as one of the actions that can be categorically excluded, it meets at least four of twelve extraordinary circumstances that under Interior’s manual disqualify it for a categorical exclusion (516 DM 2, appendix 2). The first of these is that an action that has “highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources” cannot qualify for a CE (516 DM 2, appendix 2 (2.3)). Clearly, permitting SPI to take fisher through their even-aged forest management practices, including clearcutting in fisher habitat, is controversial and involves alternative uses of available resources. Likewise, the interrelated action of reintroducing fisher onto SPI lands involves controversial environmental effects and unresolved conflicts concerning alternative uses of available resources, namely there is substantial conflict about exactly where fishers, which are themselves a limited resource, should be reintroduced.

The second extraordinary circumstance is that an action cannot have “highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.” Again, FWS is permitting SPI to take fisher through their forest management practices and facilitating the reintroduction of fisher onto their lands. It is unknown whether SPI’s forest management will support fisher and thus fisher placed on their lands may not survive. It forecloses other forest management that likely would provide more suitable habitat for fisher, as well as natural recolonization of fisher to SPI or adjacent lands. In other words, it in large part stakes fisher recovery on SPI, which is a highly uncertain prospect with highly uncertain and potentially significant effects on both forest management and fisher recovery. Similarly, facilitating fisher reintroduction onto industrial forestland establishes “a precedent for future action or represent[s] a decision in principle about future actions with potentially significant environmental effects” because it will foreclose options for forest management to support fisher or other sites for reintroduction.

Finally, the CCAA has “a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects” because it allows SPI to move forward with logging projects in the presence of fishers and facilitates reintroduction of fisher onto SPI lands. Obviously, this has cumulatively significant environmental effects.



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