Rim Fire Reforestation (45612)

Environmental Impact Statement Errata

Stanislaus National Forest

June 30, 2016

Environmental Impact Statement

Make the following changes to the Environmental Impact Statement (EIS)[1].

Response to Comments

- **Black-backed Woodpecker** (EIS, p. 651): replace the last two sentences in the first paragraph of the Response to Comment **109** with the following:

  The remaining habitat within the Rim Fire after these projects were implemented was about 42,750 acres or 84% of the habitat remained. About 25,300 acres of habitat remained on NFS lands.

- **California Spotted Owl** (EIS, p. 654-655): replace pages 654-655 to correct a formatting error in the Response to Comment **114** with the attached pages 654-655.

Inventoried Roadless Area Unit Boundary Corrections

Based on recent mapping information, the Forest Service discovered portions of six reforestation units (about 22 acres) and five thin existing plantation units (about 13 acres) overlap into the Tuolumne River Inventoried Roadless Area (IRA). These IRA unit boundaries corrections drop the IRA portions of each unit from the EIS.

- **Inventoried Roadless Areas** (EIS, p. 63): replace the second sentence in the last paragraph with the following:

  The alternatives considered in detail do not include any activities within or adjacent to these IRAs except where portions of six reforestation units (I122C, I122E, I123B, I133, I134B, I138) and five thin existing plantation units (I121D, I122A, I122B, I134A, I135A) are located near the Tuolumne River canyon rim, adjacent to the Tuolumne River IRA.

- Replace all occurrences of **21,300** (Reforestation acres) **with 21,279** (EIS, p. xiv-xvi, 12, 14, 25-26, 33-34, 51, 111, 130, 133, 299, 533, 534, 560, 568, 631)[2].

- Replace all occurrences of **12,769** (Thin Existing Plantation acres) **with 12,756** (EIS, p. xv-xvi, 14, 30, 35, 37, 39, 51, 111).

- Replace the EIS Appendix E unit acres with the Errata acres (rounded to the nearest whole number) as shown in Table 1.

[1] USDA 2016a. Rim Fire Reforestation Environmental Impact Statement. April 2016. USDA Forest Service, Stanislaus National Forest, Sonora, CA. 662 p.

[2] The total net change (-21 acres) in overall Reforestation acres is due to incorporating the IRA unit boundary corrections (-22 acres) along with all other reforestation units (rounded to the nearest whole number).

Table 1 Inventoried Roadless Area Unit Boundary Corrections

Unit	EIS (pages)	Alternatives	Treatment	EIS (acres)	Drop IRA (acres)	Errata (acres)	Drop (%)
I122C	557, 564, 577	1, 3, 5	Reforestation	13.256	8.553	4.704	64.52%
I122E	557, 564, 577	1, 3, 5	Reforestation	24.031	9.777	14.254	40.68%
I123B	557, 565, 578	1, 3, 5	Reforestation	34.901	0.002	34.898	0.01%
I133	557, 565, 578	1, 3, 5	Reforestation	19.050	3.268	15.782	17.16%
I134B	557, 565, 578	1, 3, 5	Reforestation	22.017	0.165	21.852	0.75%
I138	557, 565, 578	1, 3, 5	Reforestation	20.866	0.264	20.602	1.27%
			subtotal	**134.121**	**22.029**	**112.092**	**16.42%**
I121D	591	1, 3, 4, 5	Thin Existing Plantation	32.105	2.446	29.659	7.62%
I122A	591	1, 3, 4, 5	Thin Existing Plantation	10.967	8.834	2.132	80.56%
I122B	591	1, 3, 4, 5	Thin Existing Plantation	6.310	0.338	5.972	5.36%
I134A	591	1, 3, 4, 5	Thin Existing Plantation	6.450	0.621	5.829	9.63%
I135A	591	1, 3, 4, 5	Thin Existing Plantation	10.964	0.910	10.054	8.30%
			subtotal	**66.795**	**13.149**	**53.646**	**19.69%**
			total	**200.916**	**35.178**	**165.738**	**17.51%**

EIS=Environmental Impact Statement; IRA=Inventoried Roadless Area

select for complex early seral forests for foraging (Bond et al. 2009). Therefore, it is reasonable to conclude that reforested areas will result in a long-term loss of complex early seral foraging habitat with no evidence that such areas will ever support high quality spotted owl foraging, nesting, or roosting habitat.

143 171 242

Response: The Forest Service found little empirical evidence showing spotted owls selecting for or against plantations on NFS lands. One publication was found, Call et al. (1992), who recorded less than 2% of their telemetry locations of spotted owls within clearcut/shrub/plantation habitat on NFS lands, represented by tree size classes 0-12.9 centimeters dbh. The observed frequencies and sample size were too small to include in the analysis, thus no conclusions related to the selection for or against plantations was made. Studies related to habitat use of spotted owls on managed private timber lands was found (e.g., Diller and Thome 1999; Folliard et al. 2000; Thome et al. 1999), but does not reflect the vegetation composition in the Sierra Nevada or the management practices of the Forest Service and were not considered further. Irwin (2015) looked at short-term responses of spotted owls to various harvesting practices within young and mid-seral forested stands less than 80 years old, which is not relevant to this project. The Forest Service relied on growth modeling conducted for this project as a relative measure of effects among alternatives and related that to spotted owl habitat requirements documented in the literature to support the analysis conclusions (EIS, p. 374-384).

The commenters' suggestion that removal of complex early seral habitat would result in a long-term loss of foraging habitat is not supported by existing empirical data. Significant uncertainty exists regarding the extent to which spotted owls use burned forests (Manly 2014). There are studies that suggest spotted owls may use burned forests to forage in the short-term (Bond et al. 2009; Bond et al. 2010; Roberts et al. 2011; Lee et al. 2012; Bond et al. 2013; Lee et al. 2013), and other studies that indicate spotted owls do not select burned habitat for foraging (Clark 2007; Eyes 2014); however, uncertainties remain regarding long-term occupancy and demographic performance of spotted owls at burned sites (Keane 2014; Manley 2014). The reduction of about 2,200 acres of complex early seral habitat across the project area, as proposed under Alternatives 1, 3 and 5 may result in minor short-term negative impacts to spotted owls based on the current level of knowledge regarding spotted owl use of these habitat types. To date, no empirical evidence suggests that long-term negative impacts to owls would result from removal of this habitat. Spotted owls consistently use forested stands with greater: canopy cover, total live basal tree area, basal area of hardwoods and conifers, snag basal area and dead and downed wood, when compared to random locations for nesting, roosting and foraging (EIS, p. 373; Manley 2014). Empirical data consistently shows stands preferred by foraging owls consist of: at least 50 to 90% canopy cover at about 30 feet; at least two canopy layers; dominant and co-dominant trees averaging at least 11 inches dbh; total live tree basal area equal to 180 to 220 square feet per acre; total basal area of snags equal to 15 to 30 square feet per acre, higher than average levels of snags; at least 15 inches dbh and 20 feet tall; and downed woody debris averaging 10 to15 tons per acre, comprised of the largest logs (p. 373).

One of the Purpose and Needs identified for this project is to restore wildlife habitat and connectivity for species such as the spotted owl (p. 10). Spotted owls show the strongest associations with mature green forest conditions for nesting and roosting and habitat loss and fragmentation have been identified as significant risks to the distribution and abundance of this species across the Sierra Nevada (p. 373-375). Reforestation proposed under this project includes prescriptions that differ from historic reforestation efforts in several ways. Alternatives 1, 3 and 5 include consideration of slope position and aspect similar to that described in GTR 220 (North et al. 2009) and the EIS (p. 5). Alternative 1 has seven distinct planting designs (152 to 303 trees per acre), including oak buffers which would result in heterogeneity at the stand and landscape scales (p. 26-29). Within ten years of

planting, the density of conifer trees is expected to decrease to an estimated 104 to 207 trees per acre (p. 261). In addition Alternatives 1 and 3 incorporate prescribed fire ten years after planting, which is expected to further reduce the number of trees per acre, accelerate residual tree growth, and contribute to stand and landscape heterogeneity and structure identified in the desired condition (p. 375). Under Alternative 5, one planting design is proposed (444 trees per acre), including oak buffers which would be followed up by thinning treatments as early as age seven to achieve the desired ICO structure or heterogeneity at the stand and landscape scales, also described in the desired condition (p. 375). The density of conifer trees under Alternative 5 is expected to decrease to an estimated 211 to 236 trees per acre at year ten (p. 284). Thinning to ICO is expected to further reduce the number of trees per acre, accelerate residual tree growth and contribute to stand and landscape heterogeneity and structure identified in the desired condition (p. 375). Herbaceous and understory vegetation would be retained during reforestation efforts on up to 20% of every unit, contributing to sustained cover and recruitment of understory vegetation which would contribute to within stand structure (p. 375). Project specific growth modeling (to 80 years) predicts Alternatives 1, 3 and 5 would provide more suitable habitat including more large trees (greater than 24 inches dbh) and higher levels of snag recruitment when compared to Alternatives 2 and 4 (p. 375-376). Snags and downed logs (biological legacies) proposed under all action alternatives contribute to the structure of future forest development and are important to prey species (p. 375-376). Specifically, microsite development as downed logs decay would facilitate hypogeous fungi growth (i.e., truffles), which serve as a primary food source for spotted owl prey – the northern flying squirrel in particular (p. 376). In summary, the growth modeling conducted using the proposed reforestation treatments under Alternatives 1, 3 and 5 predicts the development of more moderate and high capability habitat as early as 80 years post planting when compared to Alternatives 2 and 4. This data combined with the habitat requirements of the spotted owl support the conclusions that spotted owls would benefit from implementation of Alternatives 1, 3 and 5.

114. **Comment**: The DEIS's assessment of impacts to California spotted owls is inadequate under NEPA. First, the DEIS (p. 371) relies upon Eyes (2014), which has been shown to have misrepresented the data and conclusions about the relationship between owls and high-severity fire patches by improperly classifying certain CESF areas that the owls were using as low/moderate-severity areas. When this error was corrected, it became clear that the owls were in fact using high-severity fire areas more than expected based upon availability (Bond and Hanson 2014 [the California spotted owl ESA listing Petition], p. 69 and Appendix A). Moreover, Eyes (2014) misrepresented Clark (2007) by claiming that spotted owls avoided high-severity fire areas when, in fact, the owls used high-severity fire areas in dense, mature forest more than expected based upon availability and avoided post-fire logged areas (Bond and Hanson 2014, p. 69).

336

Response: The Forest Service considered Eyes (2014), Bond and Hanson (2014) and numerous other sources in the analysis of California spotted owls and their use of post-fire habitats (EIS, p. 371). There is significant uncertainty regarding the extent to which spotted owls use burned forests (Manly 2014). There are also uncertainties remaining with regards to long-term occupancy and demographic performance of spotted owls at burned sites (Keane 2014; Manley 2014).

115. **Comment**: The DEIS (p. 369) admits that California spotted owls are declining in forests where logging (including mechanical thinning and post-fire logging) occurs, but then claims that the cause of the decline is unknown, implying that mechanical thinning, and post-fire logging and associated shrub removal are not factors in this decline. This position is directly contradicted by the current science presented in Bond and Hanson (2014) (at p. 24-58 and 88-102) and in the US Fish and Wildlife Service's recent 90-day determination on the Bond and Hanson (2014) ESA listing Petition for the California spotted owl. On 9/18/15, the U.S. Fish and Wildlife Service issued a determination that, based upon the Petition by Bond and Hanson (2014) (attached), listing the California Spotted