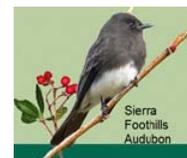




Sierra Forest Legacy
Protecting Sierra Nevada Forests and Communities



January 11, 2016

Jeanne M. Higgins
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Forest Issues Group



Sent via email to: comments-pacificsouthwest-stanislaus@fs.fed.us

Re: Comment on the Rim Fire Reforestation Draft Environmental Impact Statement (EIS)

Dear Supervisor Higgins,

These comments are submitted on behalf of Sierra Forest Legacy and our coalition partners. We have reviewed the **Rim Fire Reforestation Draft Environmental Impact Statement (DEIS)** and associated documents. In addition, we attended two Rim Fire reforestation workshops with scientists and stakeholders to discuss the latest scientific information on reforestation and innovative ways one might reforest large patches of severely burned forest. We thank you and your staff for incorporating some of our rationale and scientifically-supported ideas on reforestation into Alternative 4. We also thank you and your staff for meeting with us to discuss our concerns and details of Alternative 4. It is our belief that reforestation should be strategically implemented to help guide, not force, nature toward desired future conditions.

Select Alternative 4

Despite considerable scientific advances in our understanding of Sierra Nevada forest ecology over the past 30 years, there have been relatively few changes to the reforestation methods employed by the Forest Service. We, as well as many scientists and stakeholders, have repeatedly raised concerns about the ecological effects of densely planting large contiguous blocks of the landscape, the agency's heavy reliance on herbicides to control all competing native vegetation, and lack of resilience to fire, insects, and disease of densely stocked plantations (see our scoping comments for specific details). As such, **we encourage you to select Alternative 4**, but ask that you prioritize the use of hand and mechanical methods to control competing native vegetation in planted areas. **Alternative 4 is not only the most ecologically-friendly action alternative being proposed, but it's also the most economically-friendly**, even when future timber values are accounted for.

Lower the Maximum Number of Trees Planted to 150 TPA

The DEIS suggests that the reforestation methods outlined in the proposed action are somehow new and innovative and will result in forest heterogeneity. However, it is unclear to us how squeezing 250 to 300+ trees onto each planted acre across thousands of acres could provide heterogeneity at any relevant scale, regardless of planting pattern or spacing. Because these forests will require hundreds of years to develop true old forest complexity and structure, there is

no meaningful ecological rationale to immediately force such a large proportion of the landscape into an overly-stocked and homogeneous condition. **We ask that you lower the maximum number of trees planted on any site to 150 trees per acre** to allow for a true Individual, Clumps, and Openings (ICO) planting design.

Lower Required Stocking Levels for Natural Regeneration to 50 TPA

Even within areas proposed for natural regeneration it is being required that at least 300 trees per acre are present within five years and that, "...seedling density, species and dispersal needs to be similar to the Desired Future Condition identified for the specific location to be considered naturally regenerated." Nature is unlikely to follow such strict guidelines and fit inside this small box and it is not clear why one would desire or expect it to. Seedlings that established during the worst drought in more than a thousand years are undoubtedly adapted to such conditions. Please allow the natural disturbance processes that shaped the forests of the Sierra Nevada to determine the future of these stands. Sites that already exhibit significant natural regeneration should be allowed to freely evolve and be governed only by appropriately timed and appropriately intense fire. **We ask that you lower the minimum required stocking levels for naturally regenerating stands to 50 conifer trees per acre of any conifer species or mixture of conifer species** and allow fire managed for ecological benefits to define their future composition and structure.

Remove Individual Tree Spacing Requirements when Thinning Plantations

Injecting heterogeneity into existing plantations is being proposed by implementing an ICO prescription. However, it is also being proposed that conifer trees in these same plantations would be thinned on a 22 to 28 foot spacing. These objectives are incompatible because thinning using an individual tree spacing criteria would result in homogeneity at the fine within-stand scale and create barriers to creating heterogeneity at the coarse within-stand scale. **We ask that you remove the individual tree spacing requirement when thinning existing plantations** to allow for a true ICO prescription. We have been working with staff on the Eldorado National Forest (e.g., Dana Walsh and Duane Nelson) to develop Designation by Prescription (DxP) methods and contract language to thin plantations using an ICO prescription that does not include an individual tree spacing criteria, followed by burning that allows for low levels of mortality to create post-treatment patterns consistent with Lydersen et al. (2013). We suggest you contact Dana or Duane to discuss thinning and burning in existing plantations to create heterogeneity that do not include a tree spacing guideline. Since we are not aware of any attempts on the west-side of the Sierra Nevada to thin plantations in a manner that would create within-stand heterogeneity, such efforts should rely on adaptive management principles. A post-treatment analysis of thinning the first few plantations should be completed and adjustments made if the results are not consistent with the objectives. If the DxP approach cannot be used to result in true ICO conditions, then a marking prescription should be implemented that follows the principles of North et al. (2009).

No Evidence Spotted Owls Benefit from Industrial Reforestation Methods

We fundamentally disagree with the empirically-unsupported hypothesis that California spotted owls would benefit from the reforestation methods proposed in Alternatives 1 and 5. The Forest

Service almost always suggests that industrial reforestation methods are necessary to reach “old-forest” desired future conditions sooner than less-intensive reforestation methods to benefit the California spotted owl. However, we have yet to see any area reforested by the Forest Service in the Sierra Nevada using methods similar to those proposed in Alternatives 1 and 5 (i.e., 300+ trees per acre planted over thousands of acres) result in high quality California spotted owl habitat (i.e., multi-aged and multi-canopied forest dominated by large trees), including plantations established more than 80 years ago (i.e., within the long-term time horizon on which this DEIS is based). Again, we have yet to see the Forest Service even attempt to inject heterogeneity into plantations anywhere on the west side of the Sierra Nevada. California spotted owls have been found to select against industrially reforested areas for foraging, even at rotation age (Irwin et al. 2015); yet, they have been found to 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.

It is Not Mandatory to Meet Specific Stocking Levels

It is sometimes suggested there are mandatory stocking levels that must be met within a defined timeframe based on *FSH 2409.26b Reforestation Handbook*. Although reference to the reforestation handbook has not been made in the DEIS, we wanted to remind the Forest Service that the reforestation handbook does provide stocking level flexibility, specifically stating: “A certified silviculturist can approve (alternative) stocking levels based on a site specific prescription.” 1991 *FSH 2409.26b Reforestation Handbook, 4.11a*. If the intention of the action is to improve resilience to fire or disease, restore natural ecological process, or respond to new ideas (i.e., GTR 220/237), then alternative stocking levels should be approved by the project silviculturist. Another concern of ours is that the reforestation handbook is seriously outdated. It was developed at a time when even-aged management was commonly applied on National Forest lands in the Sierra Nevada; a time when the concepts of ecological integrity, sustainability, wildlife viability, complex early seral forests, fire return interval, heterogeneity, and ICO, were still in their infancies. We ask that you not evoke the reforestation handbook to justify reforestation stocking levels.

Follow-up Comments to Our Meeting on December 17th, 2015

We have two follow-up comments to the meeting we attended with you and your staff on December 17, 2015. First, you mentioned the Stanislaus National Forest budget may not be adequate to fully implement the proposed action. Given the significantly lower cost of implementing Alternative 4 vs. any of the other action alternatives, you would be able to implement Alternative 4 over a much larger proportion of the landscape if budgetary shortfalls are realized. **In a world of budgetary uncertainty, Alternative 4 is your best chance to meet a stated need for action, "Return mixed conifer forest to the landscape."** (emphasis added) Not to mention, the capital lost due to an ill-timed wildfire burning a reforested unit under the proposed action is much greater than it would be under Alternative 4.

Second, it was mentioned at our meeting that there was a possibility of “experimenting” with the methods proposed in Alternative 4. If you choose to implement Alternative 4 over a lesser proportion of the landscape than what is defined in the DEIS, we ask that it not be a token small-

scale experiment of a few hundred acres and that a significant proportion of the reforested units be dedicated to the Alternative 4 approach to allow us to thoroughly gauge the effectiveness of such methods. We also ask that the Alternative 4 methods be implemented concurrently with any other reforestation work and that it not be relegated to lower quality growing sites.

Summary

We ask that you select Alternative 4. Regardless of the alternative selected, we ask that the following changes be incorporated into the chosen alternative:

- 1) Lower the maximum number of trees planted on any site to 150 trees per acre.
- 2) Lower the required stocking levels for naturally regenerating stands to 50 conifer trees per acre or more of any species or mixture of conifer species.
- 3) Remove the individual tree spacing requirement when thinning existing plantations and develop a prescription that allows for variable spacing and a true ICO approach.
- 4) Minimize the use of herbicides for controlling native vegetation to the maximum extent practicable.

It is time we begin to fully embrace and apply the latest principles of forest ecology and thoughtfully reforest high severity burned forests using methods and tools that do not come at great economic or ecological costs. Compared to the proposed action, Alternative 4 is an ecologically-informed approach to actively manage high severity post-fire forests that minimizes ecological impacts and economic costs. We also encourage you to explore other new and innovative scientifically-informed approaches to active reforestation that minimize ecological and economic costs. It is highly probable that different reforestation approaches would work better under different circumstances, but there is no way to know unless we try.

Thank you for your time and consideration. Please direct any questions or comments to Ben Solvesky (ben@sierraforestlegacy.org; 928-221-6102).

Sincerely,



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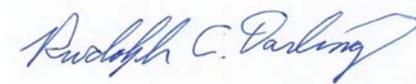
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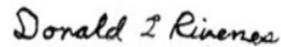
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