

REGIONAL ECOSYSTEM OFFICE

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MEMORANDUM

DATE: September 20, 2011

TO: Sharon Heywood, Forest Supervisor, Shasta-Trinity National Forest

FROM: Michael Hampton, Forest Service Representative to the REO

SUBJECT: Regional Ecosystem Office Review of the Pettijohn Fuels Reduction Project,
Shasta-Trinity National Forest

Summary:

The Regional Ecosystem Office (REO) interagency Late-Successional Reserve (LSR) Work Group has concluded its review of the treatments identified in Alternative 2 of the Pettijohn Late-successional Reserve Habitat Improvement and Fuels Reduction Project DEIS. The project is within the Clear Creek LSR, Shasta-Trinity National Forest (Forest). The Forest proposes to treat a total of 2,896 acres to reduce the risks of unacceptably severe fire in the LSR. Of these, 2,022 acres are not covered by existing exemptions in the Clear Creek Late Successional Reserve assessment. Approximately 249 acres of existing old growth would be thinned from below to 60% canopy closure, approximately 32 acres of old growth would be thinned from below to 60% canopy closure and roadside hazard snags removed, and approximately 1,741 acres in a variety of seral stages would be treated within the LSR to create fuels management zones designed to compartmentalize the landscape. The REO, based upon review by the LSR Work Group, concurs with the Forest in its finding of consistency with the Standards and Guidelines (S&G) under the Northwest Forest Plan (NWFP).

Basis for the Review:

Silviculture, risk reduction, and salvage treatments in LSRs are subject to REO review under the NWFP S&Gs (C-12-15). As required by the NWFP S&Gs (C-11), the Forest prepared a Late-Successional Reserve Assessment (LSRA). The REO reviewed the Clear Creek LSRA in 1998 and an update in 2000 and found it consistent under the NWFP S&Gs (C-11). Aspects of the Pettijohn project were not exempted from REO review under the LSRA and were brought to the LSR Workgroup for review.

Background and Project Description:

The exclusion of naturally occurring wildfire for at least 100 years has led to an accumulation of live and dead fuels throughout the LSR, increasing total fuel and horizontal and vertical continuity of that fuel. Overcrowded, tightly spaced, mature conifer stands (80-110 years old) dominate Clear Creek LSR, but do not provide old-growth habitat. Dense stand conditions contribute to reduced tree health and growth. As stand density has increased, tree crown size declined with less area for photosynthesis, causing physiological stress to trees and retarding the development of large fire-resistant conifers and viable hardwoods. In the portion of the Clear Creek LSR within the Pettijohn project area, old growth accounts for approximately 27% and mature forest approximately 62% of the land capable of developing old-growth habitat.

The desired conditions for Clear Creek LSR are to develop conditions that are sustainable long enough to allow natural processes to provide LSOG conditions through time, including key old growth habitat components and surface fuel loading at levels that will sustain LSOG habitat over approximately 50 years. Average fuel conditions within the LSR should support flame lengths of less than four feet and spread rates of less than twenty chains per hour under 90th percentile burning conditions. Fuel loadings should average less than 15 tons per acre for material \leq 3 inches diameter and less than 30 tons per acre for all material \leq 9 inches. Actual fuel loadings, including snags and downed logs, would vary according to aspect and vegetation type. Snags and down logs should be in a variety of size and decay classes. Distribution should range from individuals to larger aggregations. In the Douglas-fir and mixed conifer vegetation types the average number of snags and down logs at least twenty inches in diameter is 2-6 per acre and 5-12 per acre respectively.

Review of the Project:

The LSR Work Group reviewed the project as described in the document titled "Pettijohn LSR habitat improvement and fuels reduction project" dated 20 November 2009 and had multiple phone conversations with the field thereafter to discuss project details. The finalized project description was received on 29 July 2011 and reviewed. The proposed action (Alternative 2) in the DEIS was the basis for the review. The interagency LSR Work Group review concluded that the proposed treatment in the LSR meets the objectives and S&G for managing LSRs. This conclusion was reached in part for the following reasons:

- Fire behavior analyses using the Forest Vegetation Simulator indicate that in the absence of thinning from below, fuel conditions would support active crown fire in the overly dense stands, potentially resulting in the near or total loss of northern spotted owl nesting/roosting habitat and foraging/connectivity habitat in the stands proposed for treatment and increasing the risk of fire spread to untreated stands with unacceptable fire effects.
- Thinning from below in high quality nesting/roosting habitat would reduce expected fire behavior to predominately surface fire, maintaining canopy closure at or near 60% and maintaining high quality habitat for approximately 50 years.
- Thinning from below in moderate quality nesting/roosting habitat would maintain connectivity conditions well above minimum thresholds for approximately 30 years, with an eventual transition into high quality nesting/roosting habitat with canopy closure at or near 60%.
- Thinning from below in foraging/connectivity habitat, would maintain connectivity conditions for approximately 10 years and above connectivity conditions for the subsequent 40 years.
- Fire resistant/adapted species would be favored, reducing the risk of loss for the large tree component in treated stands.
- Fuel management zones would compartmentalize the landscape, expanding wildfire response options and reducing the risk of larger scale losses of existing northern spotted owl habitat, yet treatment prescriptions would favor retention of large, fire resistant tree species and leave larger diameter trees.

Conclusion:

Pettijohn Fuels Reduction Project, Trinity River Management Unit, Shasta-Trinity NF

Based on the interagency REO LSR Work Group's review and conclusions, the REO concurs with the Shasta-Trinity National Forest's conclusion that fuels reduction treatments proposed in the Pettijohn project are consistent with the Northwest Forest Plan.

If you have questions regarding this review, please contact Kim Mellen-McLean at 503-808-2677.



MICHAEL HAMPTON
Forest Service Representative to the REO

for

cc: Debbie Pietrzak, BLM
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