

Migratory Landbird Conservation on the Lassen National Forest

Eiler Fire Salvage and Restoration Project

Hat Creek Ranger District

Lassen National Forest

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1. Regulatory Guidance

Under the National Forest Management Act (NFMA), the Forest Service is directed to “provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” (P.L. 94-588, Sec 6 (g) (3) (B)). The January 2000 USDA Forest Service (FS) Landbird Conservation Strategic Plan, followed by Executive Order 13186 in 2001, in addition to the Partners in Flight (PIF) specific habitat Conservation Plans for birds and the January 2004 PIF North American Landbird Conservation Plan all reference goals and objectives for integrating bird conservation into forest management and planning. In addition, Audubon California (2009) has designated 145 important bird areas (IBA) in the state. The IBA nearest to the Eiler Fire area is the Fall River Mills Valley IBA, a collection of meadows primarily on State and private lands near the town of Fall River Mills. This IBA is about 12 miles northeast of the Eiler Fire. For additional information about IBAs, see: <http://ca.audubon.org/important-bird-areas-9>.

In late 2008, a *Memorandum of Understanding between the USDA Forest Service and the US Fish and Wildlife Service to Promote the Conservation of Migratory Birds* was signed. The intent of the MOU is to strengthen migratory bird conservation through enhanced collaboration and cooperation between the Forest Service and the Fish and Wildlife Service as well as other federal, state, tribal and local governments. Within the National Forests, conservation of migratory birds focuses on providing a diversity of habitat conditions at multiple spatial scales and ensuring that bird conservation is addressed when planning for land management activities.

The Lassen National Forest is proposing to manage lands on the Hat Creek Ranger District, located primarily in the Hat Creek fifth field watershed. Proposed management is intended to implement direction contained within the Lassen National Forest Land and Resource Management Plan (LRMP; USDA Forest Service 1993). Opportunities to promote the conservation of migratory birds and their habitats within the project area were considered during the development and design of the Eiler Fire Salvage and Restoration project (MOU Section C: items 1 and 11 and Section D: items 1 and 3).

2. Migratory Landbirds, Hat Creek Ranger District

To facilitate a regional approach to bird conservation, regional geographic units called Bird Conservation Regions (BCRs) were developed under the North America Bird Conservation Initiative (<http://www.nabci-us.org/bcrs.html>). BCRs encompass landscapes with similar bird communities, habitats, and resource issues. In *Birds of Conservation Concern 2008*, BCR-specific Birds of Conservation Concern (BCC) were identified by the USFWS (2008) that are in greatest need of conservation action and proactive management to prevent the need to list them as endangered or threatened. The Eiler Project is located within the Sierra Nevada BCR. Eleven species of Birds of Conservation Concern were identified for this BCR, which include: bald eagle, peregrine falcon, flammulated owl, spotted owl, black swift, calliope hummingbird, Lewis' woodpecker, Williamson's sapsucker, olive-sided flycatcher, willow flycatcher and Cassin's finch.

3. Proposed Action

The Eiler Project is being proposed as a management response to the Eiler Fire that burned approximately 14,926 acres of USFS lands in 2014. A summary of proposed treatment activities is shown below in Table 1.

Table 1. Proposed treatment categories and estimated acres in the Eiler Project

Proposed Treatment	Treatment Acres	Reforestation Acres			
		Conventional	Cluster	Founder	Natural Regen
Roadside Hazard Trees	1,174	580	228	68	297
Area Salvage – Ground Based	2,567	1,357	1,119	27	65
Area Salvage – Helicopter Based	481	33	47	402	0
Area Fuels - Mechanical	517	250	39	7	221
Area Fuels - Hand	3,602	114	822	536	2,129
Baker Cypress Treatment	361	0	0	16	345
Reforestation Only		0	0	0	815
Total Acres	8,702	2,334	2,255	1,056	3,872
Deferred Treatment					
Natural Recovery	5,384				
Roadside Hazard Trees	34 miles				
Trailside Hazard Trees	2 miles				

Note: These acreages are subject to adjustment during analysis and implementation due to reductions for wildlife habitat, RCAs, archeological sites, stand deterioration, etc. Additional pockets of merchantable timber may be added in areas currently identified for area fuels treatment.

3. Project Objectives and Design Features for Migratory Birds

The following management considerations and design features are included in the Eiler Project and benefit Birds of Conservation Concern and their habitat. Project specific design standards were developed to minimize negative effects to wildlife habitat and active nests, and minimize disturbance to known sensitive wildlife species. The desired conditions for the Eiler Project considered wildlife habitat, including habitat for migratory birds, and included the following desired conditions:

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- Surface fuel load levels that minimize high-intensity, large-scale fires within forest stands, while maintaining snags for wildlife habitat;
- Landscapes dominated by site-appropriate trees with variable densities that contribute to a fire resilient landscape and structures that provide diverse wildlife habitat and forest products; and
- Ecological services that provide wildlife habitat and production of food, regulation of carbon sequestration and decomposition, support for nutrient cycling, and improvements to recreational benefits and aesthetics.

Other overall considerations that were incorporated into the project design included:

- Due to the large patch size of moderate to high severity burn, reforestation is needed to accelerate conifer establishment and reduce the time to regenerate forest conditions. Re-establishing native forest cover quickly would minimize competition from brush and other vegetation and accelerate long-term establishment of forests that provide timber and habitat for various species. Understory vegetation, shrubs, particularly manzanita, grasses and forbs would be expected to recover naturally.
- Multiple forest cover types that include upland conifers (eastside pine and mixed conifer), hardwoods (oak, aspen and cottonwoods), riparian, and Baker's cypress were deforested in the Eiler fire. Reforestation techniques would be designed to establish the appropriate tree species, spatial arrangement, and density for each of the above cover types. This technique would increase landscape heterogeneity and provide for forest resiliency and wildlife habitat diversity in burned forest stand.

Project specific design standards developed to meet multiple objectives while benefiting wildlife and migratory songbirds include:

- Within tractor units, snag retention leave islands would be generally two to five acres in size, and will comprise approximately 25 percent of the acres within each unit. Leave patches would be distributed across the unit to maintain diversity. While rocky areas may represent a small proportion of such patches, the majority would be in good growing sites so that the patches would contain an abundant understory in the future. Snag clump locations would not occur within 150 feet of aspen and cottonwood communities on the east, south and west side stand or 100 feet on the north side to maximize light to the stand and allow for expansion.
- Within the helicopter units, all snags <10 inches diameter at breast height (DBH) would be retained, and approximately 100 square feet of basal area per acre of snags ranging from 10 inches DBH to an upper diameter that will vary by unit would be left to maintain black-backed woodpecker habitat. Snags deemed as safety hazards during operations will be felled and left on site.
- Snag retention would differ in the the riparian conservation area (RCA) land allocation to provide for future woody debris recruitment that would provide habitat structure and hydrologic function such as sediment trapping. The amount and distribution of standing trees retained would represent the range of natural variability of pre-fire suppression conditions. Within wet and dry meadows and intermittent stream RCAs, a minimum of one to two snags greater than 15 inches in diameter would be retained per 100 feet.

- Reforestation is proposed on approximately 5,645 acres within the project area in sites prepared by salvage harvest and fuels treatment.
- Four planting strategies are proposed for reforestation: conventional planting, cluster planting, founder stands, and natural regeneration (see Silviculture Report for description of strategies). Planting strategies would be utilized to assist in creating forest heterogeneity at different scales to produce a more disturbance-resilient landscape and enhance ecological function in the future. Topography, slope position, aspect, slope steepness and soil productivity would be taken into account to create different forest structures on the landscape. In general, density and canopy cover would be highest in valley bottoms, decreasing over the midslope and become lowest near and on ridgetops. Density and canopy cover along the hill slope would be higher on northeast aspects compared to southwest and vary with slope becoming more open as slopes steepen. This strategy would not only create heterogeneity to increase resiliency but would also create habitat for species that prefer denser canopy mature forest structures, such as northern goshawks. No reforestation would occur in snag retention leave islands.
- Spacing for reforestation strategies were developed for these areas to encourage hardwoods and enhance meadow and riparian function. Hardwood trees would be encouraged and promoted where they exist in plantations. Planting densities would generally be lower and trees widely spaced around California black oak. Conifers would not be planted within 20 feet of live black oak tree crowns, including sprouts greater than three feet tall.
- Reforestation of conifers would not occur within 150 feet of aspen and cottonwood communities on the east, south, and west side stand or 100 feet on the north side to maximize light to the stand and allow for expansion. Where browsing inhibits recruitment of regenerating aspen and cottonwoods, fencing would be implemented to protect regeneration until suckers and sprouts exceed the browse line.
- Reforestation planting strategies would differ as well with no reforestation occurring within 50 feet of the meadow edge. From 50 feet of the meadow edge and out, planting density would increase using the planting strategy and spacing based on the surrounding forest stand condition. Along stream channels and seasonal wetlands with existing riparian communities (e.g. willow, alder, aspen, sedges, juncus, etc.) reforestation of conifer species would not occur within 20 feet of the riparian plant community.
- Where Baker cypress is widely scattered, reforestation with Baker cypress in founder stands would occur on up to 16 acres. Reforestation would not occur where pre-fire cypress distribution occurred at high densities and natural regeneration of cypress trees is expected to be high. No additional release activities would occur.
- Forest Service personnel would visit riparian areas within the Eiler Fire perimeter during the growing season of 2015 to determine the amount and effectiveness of natural regeneration. If vegetation regrowth does not appear to be sufficient, then hand plantings of willow, aspen, sedges, and/or other appropriate riparian species would be hand planted as a follow-up treatment.
- Riparian species (aspen, cottonwood, alder, willow, dogwood, etc.) would not be removed during project activities.

- Black oak, aspen, and other hardwoods, alive or dead, that are three feet tall would be retained and protected inside treatment units within the limits of safety and operability.
- No reforestation will occur within 50 feet of snag retention islands to provide a safe working environment for workers.
- Treatment activities would not occur within suitable post-fire California spotted owl or goshawk habitat.
- A Limited Operating Period (LOP) would be in effect from February 15th through August 15th within ¼ mile of spotted owl activity centers, unless surveys confirm that California spotted owls are not nesting. If the nest site cannot be determined, the LOP would be within ¼ mile of the established PAC.
- An LOP would be in effect from February 15th through September 15th within ¼ mile of active goshawk nests, unless surveys confirm that northern goshawks are not nesting.
- In addition to the overall snag retention, retain large diameter cull trees that may be of use as den sites by bears and other wildlife.
- No fire salvage within the Freaner Mountain spotted owl protected activity center (PAC). Limit fire salvage to only that necessary for the establishment of founder stands within the eastern portion of the home range core area (HRCA) (eastern halves of sections 32 and 5).

5. Project Effects to Migratory Landbirds

Changes to habitat as a result of the Eiler Project would primarily affect migratory bird species that utilize burned forests or snags to meet their habitat needs. Effects to habitat of select migratory species including the black-backed woodpecker and hairy woodpecker which utilize burned forest habitat or snags as important habitat attributes have been assessed in the Management Indicator Species (MIS) report for this project. Effects to select Threatened, Endangered and USFS Sensitive birds and their habitats have been analyzed in the Biological Evaluation for the Eiler Project. Of the eleven species of Birds of Conservation Concern, three (bald eagle, California spotted owl, and willow flycatcher) were specifically addressed in this project's Biological Evaluation. None of the remaining species are known to specifically require burned forest habitat.

Impacts to migratory landbirds are expected to vary across the analysis area because the effects of past, present, and reasonably foreseeable future actions vary spatially. For instance, vegetative response within the Thousand Lakes Wilderness will be quite different than within units salvaged and reforested. Future habitat within reforested units will vary depending on the density of planted trees, inclusion of oaks or aspen, and other variables. Due to the complexity of these spatial variations and because each species responds differently to its environment, the direction, magnitude, and duration of effects to migratory landbirds are also expected to vary.

This inherent variability plus the project design features are expected to moderate effects to migratory landbirds. For example, unaltered burned forest habitat would be retained in areas not receiving treatment, such as Wilderness, Inventoried Roadless Areas and inoperable areas. Patches of burned forest and lightly salvaged burned forest would be maintained throughout the area in salvage units in which 25 percent will be

unsalvaged. Helicopter units would maintain approximately 100 square feet of snag basal area in snags greater than 10 inches DBH, as well as all snags <10". Thus, the project would provide habitat for migratory landbirds adapted to burned areas.

The proposed action also considered the importance of understory vegetation and other vegetative communities within the fire perimeter. For example, conventional reforestation with wide spacing, cluster planting and the establishment of founder stands were all designed to retain understory vegetation within the units planted to these methods. In addition, planting densities would generally be lower and trees more widely spaced in areas containing black oaks, and conifers would not be planted within 20 feet of live black oak tree crowns, including sprouts greater than three feet tall. Also, reforestation of conifers would not occur within 150 feet of aspen and cottonwood communities on the east, south, and west sides of the community, or 100 feet on the north side to maximize light to the stand and allow for expansion. Reforestation would not occur within 50 feet of a meadow edge. And, when along stream channels and seasonal wetlands with existing riparian communities, reforestation of conifer species would not occur within 20 feet of the riparian plant community. Additionally, 25 percent of tractor harvested units would remain unharvested, and would also remain unforested.

These strategies to alter planting densities in or near oak, aspen, cottonwoods, meadows, stream channels and seasonal wetlands would serve to retain and promote understory vegetation and other plant types. The acres that are reforested and planted to coniferous trees would serve to hasten the recovery of forested conditions to these areas, representing about 38 percent of USFS lands burned in the fire.

All of these design features, plus the snag retention, would help insure a diversity of wildlife habitats is retained and created within the Eiler Project area.

6. Alternative 2 - No Action

Under this alternative the proposed action would not be implemented. There may be a reduction of hazard trees along approximately 1,095 acres of roadside corridors. Fire-killed or damaged trees considered a public hazard to roadways would be felled and left as logs. Other habitats and vegetative structure would remain in their current condition with future habitat changes resulting from natural forest regeneration.

7. Alternative 3 – Roadside Hazard Tree

This alternative is similar to Alternative 2. . There would be a reduction of hazard trees along the same roadside corridors as in Alternative 2. The primary difference is that in this alternative, sawtimber sized hazard trees would be commercially removed, not just felled and left as logs, while smaller diameter trees may be piled and burned. Other habitats and vegetative structure would remain in their current condition with future habitat changes resulting from natural forest regeneration.

8. References

CalPIF (California Partners in Flight). 2002. Version 2.0. The oak woodland bird conservation plan: a strategy for protecting and managing oak woodland habitats and associated birds in California (S. Zack, lead author). Point Reyes Bird Observatory, Stinson Beach, CA. <http://www.prbo.org/calpif/plans.html>.

CalPIF (California Partners in Flight). 2004. Version 2.0. The Coastal Scrub and Chaparral Bird Conservation Plan: a Strategy for Protecting and Managing Coastal Scrub and Chaparral Habitats and Associated Birds in California (J. Lovio, lead author). PRBO Conservation Science, Stinson Beach, CA. <http://www.prbo.org/calpif/plans.html>.

Rich, T. D., C. J. Beardmore, H. Berlanga, P. J. Blancher, M. S. W. Bradstreet, G. S. Butcher, D. W. Demarest, E. H. Dunn, W. C. Hunter, E. E. Iñigo-Elias, J. A. Kennedy, A. M. Martell, A. O. Panjabi, D. N. Pashley, K. V. Rosenberg, C. M. Rustay, J. S. Wendt, T. C. Will. 2004. Partners in Flight North American Landbird Conservation Plan. Cornell Lab of Ornithology. Ithaca, NY.

USDA Forest Service, USDI Fish and Wildlife Service. 2008. Memorandum of Understanding between the US Department of Agriculture Forest Service and the US Fish and Wildlife Service to promote the conservation of migratory birds. FS Agreement #08-MU-1113-2400-264. Washington, D.C.

USDA Forest Service. 2000. Landbird Strategic Plan, FS-648. Washington, D.C.