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Survey and Manage Report

Westside Fire Recovery Project

Happy Camp/Oak Knoll and Salmon/Scott River Ranger Districts
Siskiyou County, California

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Survey and Manage Report

Introduction

This report is intended to document the Westside Fire Recovery Project's consistency with the 2003 Survey and Manage species list except for 12 species which will remain consistent with the 2001 Record of Decision (ROD) (USFS Regional Guidance 2014). Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffers, and Other Mitigation Measures Standards and Guidelines (2001-ROD). This document reflects the January 2001 *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (USFS et al. 2001) with modification based on the district court's remedy order issued on February 18, 2014 (*Conservation Northwest v. Bonnie*, W.WA No. C08-1067-JCC) (USFS Regional Guidance 2014)

The following analysis is used by the Responsible Official to consider the potential for significant negative impacts to Survey and Manage (S&M) species' habitat, their life cycles, microclimate, or life support requirements to determine the need for pre-disturbance surveys for S&M species, considering the best available published and unpublished literature since 2001, direction in the Standard and Guidelines Section of the 2001-ROD and guidance provided in the January 2001 "Questions on Use of the ROD for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines".

Proposed Actions and Alternatives Analyzed

For a detailed description of the alternatives considered for this analysis, please see chapter 2 of the project draft EIS.

Methodology

Survey and Manage species list covers the entire Northwest Forest Plan planning area so not all species on the list occur on the Klamath National Forest and the species that occur on the forest may not occur in the project area. In order to determine whether any Survey and Manage species may be affected by the proposed activities, the following process was used.

Step:

1. Using Table 1-1, Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage Species (January 2001) as amended in 2003 and adjusted by USFS Regional Guidance (2014). Determine which species potentially occurs in the project area by determining whether the species range overlaps with the project area using the best research and species reports.
2. Identify habitat in the project area that contains habitat for the species of interest. Habitats are identified in this report by various combinations of the following data layers:
 - CALVEG data including cover types, size classes, and canopy closure
 - On-the-ground habitat typing
 - Degree to which project design features (PDFs) will avoid or minimize significant effects

3. Review available data for known species locations:
 - S&M SPECIES known sites mapped in Klamath NF (Natural Resource Information Systems (NRIS)).
 - California Natural Diversity Database (CNDDDB)
4. Determine whether proposed activities may affect known sites or possibly occupied habitat.
5. Apply Standards and Guides to minimize impacts.
6. Determine whether any project activities are exempt from surveys (2006 Pechman order)

Step 1) Identified Species Possibly Occurring in Project Area

Species Category A

- Siskiyou Mountain salamander
- Blue-gray tailed dropper
- Tehama chaparral snail

Recommendations from Northwest Forest Plan (2001ROD):

- a) Manage all known sites according to Management Recommendations for the species
- b) Survey at project level prior to habitat disturbing activities in accordance with Survey Protocols to avoid loss of undiscovered sites by habitat disturbing activities
- c) Strategic surveys for species in this category to discover unknown sites.

Species Category B

- *Monadenia chanceana* (B-3)
- *Monadenia fidelis ochromphalus* (B-3,4)

Recommendations from Northwest Forest Plan (2001ROD):

- a) Manage all known sites according to Management Recommendations for the species
- b) Pre-disturbance surveys are not required
- c) Strategic surveys for species in this category to discover unknown sites.

Species Category D

- *Helminthoglypta talmadgei*

Recommendations from Northwest Forest Plan (2001ROD):

- a) Manage high priority sites according to Management Recommendations for the species
- b) Pre-disturbance surveys not practical or not necessary

Species Category E

- *Ancotrema voyanum* (Survey requirements for this species are triggered by grazing activities. Grazing is not proposed in this project therefore the effects are likely not significant.)

Recommendations from Northwest Forest Plan (2001ROD):

- a) Manage all known sites according to Management Recommendations for the species
- c) Pre-disturbance surveys NOT required
- d) Strategic Surveys

Step 2) Available habitat in the project area

Using the habitat definition where these species have been found on the Forest, habitat was delineated for each species within the area of proposed actions.

Siskiyou Mountain Salamander (*Plethodon stromi*) is found primarily in loose rock rubble at the base of talus slopes and under surface objects. Most specimens have been collected from north-facing slopes or in heavily shaded areas. It lives in the lowest moisture region of any western *Plethodon*, and is active above ground only during spring and fall rains. Primarily feeds on small insects and other invertebrates, foraging on damp soil at ground surface and under surface objects (Degross and Bury 2007).

Yellow-based Sideband (*Mondenia fidelis ochromphalus*) is strongly associated with late-successional conifer forests with high canopy closure, woody debris, and rock talus. In addition, the habitat typically contains areas with high moisture (Duncan et al. 2003).

Klamath shoulderband (*Helminthoglyphata talmadgei*) is associated with closed canopies with high moisture. The species uses woody debris and moss for cover and may be limited by the availability of herbaceous vegetation (Duncan et al. 2003).

Hooded lacetooth (*Ancotrema voyanum*) is associated with moist late-seral, closed canopy forest in riparian areas containing hardwoods with leaf litter and woody debris. This species is typically found in vicinity of perennial and intermittent streams (Duncan et al. 2003).

Siskiyou sideband (*Monadenia chaceana*) may be found within approximately 100 feet of rocky areas, talus deposits and in associated riparian areas in the Klamath province and adjacent portions of the south-western Oregon Cascades. Areas of herbaceous vegetation in these rocky landscapes adjacent to forested habitats are preferred. Areas that contain moist, shaded rock surfaces are preferred for daily refuges. Forest habitats without either rock features or large woody debris are not currently considered to be suitable habitat for this species (Duncan et al 2003).

Blue-gray tailedropper (*Prophyaon coeruleum*) is found in moist conifer and mixed conifer/hardwood forests usually located in sites with relatively higher shade and moisture levels than those of the general forest habitat. It is usually associated with partially decayed logs, leaf and needle litter (especially hardwood leaf litter), mosses and moist or riparian plant communities such as big leaf maple and sword fern associations (Duncan et al. 2003).

Tehama chaparral snail (*Trilobopsis tehamana*) is associated with deciduous leaf litter near limestone caves, talus or rocky outcrops within mature forest habitats (Duncan et al 2003). Essential habitat components for the Tehama chaparral include conifer leaf litter and food sources of leaf and needle litter and fungi. Tehama chaparral further requires coarse woody debris, consistent soil moistures, and a cool and moist moisture regime during the summer to survive (Furnish et al 1997).

Step 3) Evaluate existing data to identify known sites

Known sites were identified using observation databases. We used the Forest Service Natural Resource Information System (NRIS) database, California Natural Diversity Database (CNDDDB), and data provided by the US Fish and Wildlife surveys. Known sites are the locations where the species has been located in previous surveys, but this doesn't mean that all known sites still contain the species. Natural disturbance such as fire can change habitat conditions (e.g. loss of tree canopy cover) and resulting in sites becoming unfavorable for particular species.

Table 1. Number of known sites within the project area

Species	Known sites in the project area*
Siskiyou Mountains salamander	43
Yellow-based sideband	22
Klamath shoulderband	0
Hooded lacetooth	7
Siskiyou sideband	1
Blue-gray tailedropper	0
Tehama chaparral snail	3

Step 4) Comply with Survey and Manage Standards and Guidelines

In part of the Standards and Guidelines, surveys prior to project implementation are needed for particular categories of survey and manage species that may be affected by ground disturbing activities. These ground disturbing activities are described below.

As defined in 2001 record of Decision, habitat-disturbing activities are defined as those disturbances *likely to have a significant negative impact on the species' habitat, its life cycle, microclimate, or life support requirements.* The evaluation of the scale, scope, and intensity of the anticipated negative impact of the project on habitat or life requirements should include an assessment of the type, timing, and intensity of the disturbing activity. "Habitat-disturbing" is not necessarily the same as "ground-disturbing"; helicopter logging or logging over snow-pack, for example, may not disturb the ground but might clearly affect microclimate or life cycle habitat factors.

Determine the need for survey of a proposed project area, four criteria must be evaluated:

- 1) The proposed project must occur within the suspected range of a species;
- 2) The project must occur within suitable habitat for those target species;
- 3) The proposed project must have *the potential* of causing "significant negative impact" which may alter soil, litter, vegetation or other habitat elements and thereby directly or indirectly impact survey and manage species of concern on federally managed lands or the species persistence at the project site;

- 4) Surveys for those species suspected to occur within the project area are required according to the management categories in which they occurred.

Exemptions from Standards and Guidelines

This analysis uses the result of the most recent Forest Service Regional guidance (USFS Regional Guidance 2014). Survey Protocols and Management Recommendations (including Conservation Assessments, Strategies, and Species Fact Sheets) created previously are still valid, and are unaffected by any recent Survey and Manage court rulings. In addition, existing exemptions from the Survey and Manage standards and guidelines as stipulated by Judge Pechman (October 11, 2006, “Pechman exemptions”) are still valid:

- 1) Thinning stands younger than 80 years old;
- 2) Replacing culverts on roads that are in use and part of the road system, and removing culverts if the road is temporary or to be decommissioned;
- 3) Riparian and stream improvement projects where the riparian work is planting, obtaining material for placing in-stream, and road or trail decommissioning; and where the stream improvement work is the placement large wood, channel and floodplain reconstruction, or removal of channel diversions; and
- 4) The portions of the projects involving hazardous fuel treatments where prescribed fire is applied.

Using Pechman Exemptions 2006, the proposed fuels treatments (exemption 4) and site prep/plant treatments (exemption 1) for this project would be exempt from Survey and Manage standards and guidelines including pre-disturbance surveys.

In addition to the Pechman Exemptions, the Record of Decision and Standards and Guides for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (2001), Standard and Guideline number 22 states that pre-disturbance surveys are not needed for some activities like “falling hazard trees”. Therefore, pre-disturbance surveys will not be conducted for roadside hazard treatment.

Therefore, pre-disturbance surveys will be evaluated for salvage units, road construction, and landings within stands over 80 years of age that contain existing habitat for Tehama chaparral snail, Siskiyou Mountains salamander, or blue-gray tail dropper per the decision of the Responsible Official.

Rapid Assessment of Vegetation Condition (RAVG) after wildlife

For the post-fire assessment of habitat, we used Rapid Assessment of Vegetation Condition after Wildfire (RAVG) data to estimate the level of fire effects to habitat. RAVG is a vegetation burn severity modeling approach to assess the change in vegetation condition. The RAVG data spatially displays the tree basal area loss due to fire throughout the burned area. Therefore, in any given spot in the fire perimeter, we can estimate the fire effects to the vegetation using the RAVG level of basal area loss. For this analysis the RAVG data was split into five classes: no burn (<1%), very low (1-25%), low (25-50%), moderate (50-75%), and high (75-100% basal area loss) to represent the fire severity.

Using the RAVG data and the habitat GIS data, habitat can be assessed to determine the current habitat condition. Using on-the-ground habitat verification, the accuracy of the RAVG and habitat GIS data was sampled through multiple field visits in 2014 and 2015.

Analysis Indicators

The significance of management activities on Survey and Manage species depends upon many factors, including the current habitat conditions of the known populations, the habitat conditions necessary to support the species, and the degree of species sensitivity to short-term and long-term habitat modification. Each alternative was evaluated in terms of how the proposed activities would meet the requirements of the species specific management recommendations, if known sites are present, and how the project would comply with the 2001 Record of Decision (USDA 2001) and the 2001, 2002, and 2003 Annual Species Review. The analysis indicator for this analysis is the number of known sites affected by project activities.

Assumptions for analysis

- Pre-fire habitat that burned at moderate or high severity will not provide the long-term needs for S&M species considered in this analysis.
- All known locations for these species were captured in the CNDDDB and NRIS databases.

Spatial and Temporal Bounding of Analysis Area

For alternative 2, 3, 4, and 5, the spatial bounds will be limited to the known sites.

The short-term temporal bounds will be limited to the time for each unit to be implemented which is about 5 years. Long-term bound will be 20 years.

Affected Environment

The project area was affected by a series of small lightning started fires in 2014 that burned a large portion of the Forest (called collectively here as “2014 fires”). The Happy Camp and Whites project areas contained larger patches of mid- to late-successional habitat mostly connected by young forest. Unlike the Happy Camp and Whites project areas, the Beaver project area prior to the 2014 fires contained a patchwork of conifer habitat, but due to previous fires, most of the older forest was greatly fragmented and connected by younger conifer forest, oak woodland, or chaparral. The 2014 fires resulted in the loss of many acres of various habitat types.

The Northwest Forest Plan designated a list of Survey and Manage species that are associated with late-successional habitat. Since the time of this plan, new information has shown many of these Survey and Manage species (mollusk and salamander species) occur in areas outside of late-successional forest likely because other habitats can provide similar micro-site condition, but none of the Survey and Manage species on the Forest are associated with high severity burned forest. Prior to the fire, a large portion of the moderate and high severity burned area in the project area likely provided Survey and Manage habitat, but without canopy cover, decaying large coarse woody debris, and leaf litter to provide micro-site conditions, habitat conditions are not favorable for these species and persistence for most of the mollusk and salamander sites is not likely.

Therefore, habitat within pre-fire habitat that burned at very low and low severity may contain the micro-site conditions associated with the S&M species analyzed for this project. However, the habitat affected by moderate and high severity is not likely to provide the needed micro-site conditions for these species given the lack of canopy cover and understory vegetation. High severity fire kills all the trees and consumes most of the small vegetation resulting in no canopy

cover, few charred pieces of woody debris, and many snags. This will create a hot, dry condition that is not conducive habitat for mollusk or salamander species. Moderate severity fire affected habitat may provide some canopy cover, but most or all the understory and litter/duff has been consumed by the fire thus creating unfavorable habitat conditions.

Environmental Consequences

Alternative 1

Direct Effects and Indirect Effects

No sites will be directly affected in this alternative. The lack of treatment will not affect the current canopy cover, coarse woody debris, or leaf litter/duff which are important habitat components. In the short-term, the snags and limited down wood in high fire severity affected habitat will continue to provide hot, dry conditions for these species. In the moderate fire severity affected habitat, the small amount of canopy cover will likely decrease in the short-term with delayed tree mortality thus creating even hotter and drier conditions possibly similar to the high severity fire affected habitat.

In the long-term, the abundant source of snags will provide a source of woody debris for many years. Woody debris is an important habitat component for the species in this analysis, especially the blue-gray tail dropper. The large woody debris in conjunction with regenerating trees may provide micro-site conditions in the long-term (20 years), but the regeneration of habitat will take much more time (beyond the long-term time span for this analysis).

Cumulative Effects

Complying with the survey and manage standards and guidelines in alternative 1 will not create any direct or indirect effects. Without direct or indirect effects, then there are no cumulative effects.

Alternative 2, 3, 4 and 5

Direct and Indirect Effects

The habitat that was affected by high severity fire isn't expected to provide cool, moist condition that is desired by the species analyzed here. Despite some of the species likely surviving the fire because species like the Siskiyou Mountains salamander which would be far enough below the talus surface to avoid the heat created by the fire, the occupied sites are not likely to persist. However, the salamander species may be able to find suitable habitat outside the moderate and high severity burned areas. The proposed salvage will remove patches of dead or dying trees that will no longer provide canopy cover needed for the Survey and Manage species. Given the change in conditions, the sites where the species occurred prior to the fire are not likely to persist without canopy cover and may not be active for many years. In order to avoid potential effects to known sites, a protection buffer will be applied to known sites using a Project Design Feature (PDF) thus mitigating potential effects. Therefore, the use of protection buffers for all known sites and surveys of Tehama chaparral snail, Siskiyou Mountains salamander, and blue-gray

taildropper will meet the compliance for Survey and Manage requirements. So, there are no sites directly impacted by the treatments in any alternative.

Cumulative Effects

Complying with the survey and manage standards and guidelines in alternatives 2, 3, 4, and 5 will not create any direct or indirect effects. Without direct or indirect effects, then there are no cumulative effects.

Literature Cited

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