Counterpart Regulations Biological Assessment

Biological Assessment for the Dead Stew Project

Ashland Resource Area
Medford District
Bureau of Land Management

I. INTRODUCTION

This purpose of this biological assessment (BA) is to fulfill the requirements given in the Alternative Consultation Agreement (USDI 2004), which describes consultation for species listed as Threatened or Endangered (Listed Species) by the Endangered Species Act (ESA) for National Fire Plan (NFP) projects undertaken for the Bureau of Land Management (BLM) in Oregon and Washington. The set of guidelines describing this kind of consultation is commonly referred to as the counterpart regulations. The counterpart regulations may be used only in cases where the proposed action may affect, but is not likely to adversely affect (NLAA) Listed Species or their designated Critical Habitat and the actions are part of the NFP. The Federal Register entry, that codifies the use of the counterpart regulations, states that they "do not change the analysis that is conducted for determining how a proposed project affects listed species or critical habitat" (Federal Register 2003).

The BLM has determined the Dead Stew project may affect, but is not likely to adversely affect (NLAA) northern spotted owls, (*Strix occidentalis)* or their Critical Habitat.

Definitions and Habitat Descriptions

Northern Spotted Owl Sites

Documented Spotted Owl Sites are defined as locations with evidence of continued use by spotted owls, including breeding, repeated location of a pair or single birds during a single season or over several years, presence of young before dispersal, or some other strong indication of continued occupation. Documented northern spotted owl (NSO) sites are tracked in the BLM northern spotted owl database. The majority of the documented sites were established through protocol level surveys completed in the late 1980s and early 1990s. Currently, documented spotted owl sites are recorded in an opportunistic manner, because protocol surveys are generally no longer conducted. Additional site locations have been established through a spotted owl demographic study taking place on portions of the District. All documented sites, except sites found nonnesting through protocol surveys, receive seasonal protection (Appendix A).

Known Spotted Owl Activity Centers (KOACs) are small Late-Successional Reserves representing the best 100 acres associated with known spotted owl activity centers in Matrix and Adaptive Management Areas (as of January 1, 1994). The criteria for mapping these areas are identified on pages C-10 and C-11 of the Northwest Forest Plan (NWFP) Standards and Guidelines (USDA and USDI 1994b).

Computer Generated ("G") Sites are estimated utilizing the Methodology for Estimating the Number of NSOs Affected by Proposed Federal Actions (USDAUSDI 2008), a process used to estimate effects to spotted owls in areas where survey information is not available. The methodology relies on known spotted owl locations, derived from spotted owl surveys, as the foundation for generating a map of likely of spotted owl locations.

Provincial Home Range is defined, for purposes of this document, as a circle located around an activity center and represents the area that spotted owls are assumed to use for nesting and foraging in any given year. The home ranges of adjacent spotted owl pairs may overlap. Provincial home range radii vary based on the physiographic province in which they are located: This project is located within the Klamath Mountains Province, and the homerange radius for this area is 1.3 miles (or approximately 3,400 acres within the home range area).

Core Area is a 0.5-mile radius circle (encompassing approximately 500 acres) around a NSO nest or center of activity used to delineate the area presumably most heavily used by spotted owls during the nesting season; it is included in the provincial home range circle. Core areas represent the areas which are more readily defended by territorial NSOs and generally do not overlap the core areas of adjacent spotted owl pairs.

Nest Patch is the 300-meter radius area around a known or likely NSO nest site; it is included in the core area.

Table 1. Activity periods of the spotted owl as addressed in this document.

species	breeding season	critical breeding season
spotted owl	Mar. 1 – Sept. 30	Mar. 1 – June 30

Table 1 summarizes the maximum observed periods for nesting activities *(breeding season)* and the period during which disturbance has a greater potential than at other times of the year for adversely affecting nesting *(critical breeding season).*

Northern Spotted Owl Habitat

The District identifies spotted owl habitat based on the following definitions:

Nesting, Roosting, and Foraging (NRF) Habitat for the spotted owl consists of habitat used for nesting, roosting, *and* foraging. Spotted owl NRF habitat also functions as dispersal habitat. Generally, this habitat is multistoried, 80 years old or more (depending on stand type and structural condition), and has sufficient snags and down wood to provide opportunities for nesting, roosting, and foraging. The canopy closure generally exceeds 60 percent, but canopy closure or age alone does not qualify a stand as spotted owl NRF habitat. Other attributes of NRF habitat include: a high incidence of large trees with various deformities (e.g., large cavities, broken tops, mistletoe infestations, and other evidence of decadence); large snags; large accumulations of fallen trees and other woody debris on the ground; and sufficient open space below the canopy for spotted owls to fly (Thomas et al. 1990). Spotted owl NRF habitat in

southwest Oregon is typified by mixed-conifer forest, recurrent fire history, patchy habitat components, and a relatively high incidence of woodrats, a high quality spotted owl prey species in the area.

Forsman et al. (1984) described some of the differences in NRF habitat within the Klamath Mountains Province that are typical of large parts of the Medford District:

> "Eighty-one percent of all nests in northwestern Oregon were in cavities, compared to only 50 percent in the Klamath Mountains. These differences appeared to reflect regional differences in availability of the different nest types. Dwarf mistletoe infections in Douglas-fir (and numerous debris platforms that were associated with dwarf mistletoe infections) were common in the mixed coniferous forests of the Klamath Mountains and the east slopes of the Cascades, but did not occur in western Oregon."

Forsman et al. (1984) documented the range of nest trees for platform nests (n=47) as 36 to 179 cm (14.2 to 70.5 inches) DBH averaging 106cm (41.7 inches) DBH. Mistletoe is occasionally used as a nesting substrate in southwest Oregon, which sometimes makes smaller trees suitable as nest trees. For spotted owls, features that support nesting and roosting habitat typically include a moderate to high canopy (70 to 90 percent); a multistoried, multi-species canopy with large overstory trees (greater than 30 inches DBH); a relatively high incidence of larger trees with various deformities, including mistletoe, large snags, large accumulations of fallen trees and wood on the ground; and flying space (Thomas et al. 1990).

Dispersal-only Habitat is a subcategory of "all dispersal" habitat for spotted owls. Thomas et al. (1990), defined dispersal habitat as forested habitat more than 40 years old, with canopy closure more than 40 percent, average tree diameter greater than 11 inches, and flying space for spotted owls in the understory, but lacking other components found in spotted owl NRF habitat. Dispersal habitat provides temporary shelter for spotted owls moving through the area between spotted owl NRF habitat and some opportunity for spotted owls to find prey, but does not provide all of the requirements to support a spotted owl throughout its life. NRF habitat also provides dispersal.

Capable Habitat is forest land that is currently not spotted owl habitat but can become spotted owl NRF or dispersal habitat in the future, as trees mature and the canopy fills in.

Unsuitable Habitat does not provide habitat for NSO and will not develop into NRF or dispersal in the future.

Northern Spotted Owl Critical Habitat

Critical Habitat for listed species is defined by the ESA as "(1) the specific areas within the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, on which are found those physical or biological features [constituent elements] (I) essential to the conservation of the species and (II) which may require

special management considerations or protection ; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species" [16 U.S.C. § 1532(5)(A)]. Designated critical habitats are described in 50 CFR part 17 and part 226.

Northern Spotted Owl Critical Habitat includes the primary constituent elements that support nesting, roosting, foraging, and dispersal. Designated critical habitat also includes forest land that is currently unsuitable, but has the capability of becoming NRF habitat in the future (57 FR 10:1796-1837).

The final rule for Revised Designation of Critical Habitat for the northern spotted owl was published by the USDI Fish and Wildlife Service (FWS) in the *Federal Register* was signed on August 12, 2008 and will be termed *2008 Critical Habitat* in this document. Prior to 2008, Critical Habitat was designed in 1992, and will be called *1992 Critical Habitat* in this document.

Primary Constituent Elements are defined as the physical and biological features of designated or proposed critical habitat essential to the conservation and recovery of the species, including, but not limited to: (1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and (5) habitats that are protected from disturbance or are representative of the historic geographic and ecological distributions of a species [ESA S3(5) (A)(i), 50 CFR 424, 12 (b)].

In the final CHU rule, the Service defined the Primary Constituent Elements (PCE) of NSO Critical Habitat as the following:

(1) Forest types known to support the northern spotted owl across its geographic range.
(2) Forest types as described in PCE 1 of sufficient area, quality, and configuration, or that have the ability to develop these characteristics, to meet the home range needs of territorial pairs of northern spotted owls throughout the year. The three habitat components required within the home range of a northern spotted owl include:
    (a) Nesting Habitat - *breeding, reproduction, and rearing of offspring*.
    (b) Roosting Habitat - *cover, or shelter.*
    (c) Foraging Habitat.- *food, or other nutritional or physiological requirements.*
(3) Dispersal habitat.

The above summary is a cursory review of NSO Critical Habitat, and is designed to provide general background on the subject. A more detailed review of Critical Habitat and the Primary Constituent Elements of NSO Critical Habitat can be found in the Federal Register (Federal Register 2007).

Forest Management Treatment Types within Spotted Owl Habitat

Forest stands in southwest Oregon are often multiple-aged with multiple canopy levels that have resulted from previous harvesting or from past natural stand disturbance such as repeated historic low intensity fire (USDI FWS 1992a, Vol. II, 2-37). Effects of individual forest management activities have been determined by the District following these descriptions.

Treat and Maintain Spotted Owl NRF or Dispersal Habitat means an action or activity will occur within spotted owl NRF or dispersal habitat, but will not change the habitat classification, post treatment. Affected stands of spotted owl NRF habitat will retain at least 60 percent canopy cover, large trees, multistoried canopy cover, standing and down dead wood, diverse understory adequate to support prey, and may have some mistletoe or other decay. Spotted owl dispersal habitat will continue to provide at least 40 percent canopy cover, flying space, and trees 11 inches diameter at breast height (DBH) or greater, on average.

Downgrade Spotted Owl NRF Habitat means to alter the function of spotted owl NRF habitat to an extent that it no longer supports nesting, roosting, and foraging behavior, but will retain enough tree cover to support spotted owl dispersal.

Remove Spotted Owl Habitat means to alter known spotted owl NRF or dispersal habitat to an extent that it no longer supports spotted owl nesting, roosting, foraging, or dispersal.

II. DESCRIPTION OF THE PROPOSED ACTION

The Action Area

The Action Area is defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR 402). For the purposes of this Assessment, the Action Area is defined as the Star Gulch – Applegate River 6th field sub-watershed (Map 1). This watershed contains all the units that would receive treatment under the Dead Stew project. The Action Area is entirely contained within the Klamath Mountains physiographic province. The Action area is also located within the Wildland Urban Interface (WUI).

The ecological diversity of communities and species of this region is attributed to its physiographic setting at the confluence of the Klamath and the Cascade ecoregions. Many eastern Cascade and Great Basin species are on the periphery of their range in the Klamath sub-basin and spill into the southern edge of the Rogue Valley from the east. The juxtaposition of these regions has led to a diverse array of species including species whose distributions are centered south into the Sierras of California, east into the Great Basin, or north up the Cascades and the Coast range.

The Action Area was examined under the Applegate – Star / Boaz Watershed Analysis (USDI 1998). The Applegate – Star / Boaz Watershed Analysis describes the vegetative condition of the Action Area in great detail, and a great deal of pertinent information is available in that document. A condensed summary of the general forest conditions present within the watershed is included here:

"Conifers appear to grow in suitable microsites surrounded by oak woodlands, shrublands, and grasslands creating a natural fragmentation of forest lands across the landscape. At the stand level, the forest structure is quite homogeneous in the analysis area. Most of the stands across the analysis area are primarily even-aged with a single canopy layer and a high number of trees in relatively small diameter classes. There are few trees per acre over 30 inches in diameter. A limited number of trees bearing old-growth characteristics are found scattered throughout the overstory. When an understory is present, it is primarily Douglas-fir and pacific madrone due to the shade tolerance of these species."

In general, the Action Area contains mostly dry Douglas-fir plant associations. Distribution and landscape patterns of plant species and communities are controlled primarily by physical factors of the environment, which include moisture, temperature, light, and soil type. Waring (1969) found that in the eastern Siskiyous, where the Applegate-Star Watershed Analysis Area is located, moisture and temperature proved to be the most important factors limiting vegetation. The eastern Siskiyous are hotter and drier than the western Siskiyous, and many species found in the western Siskiyous cannot tolerate the lower moisture and heat stress of the eastern Siskiyous (Waring 1969).

Table 2. Acres of Land by Ownership and NSO habitat within the Action Area.

NSO Habitat	BLM	FS	Private	Grand Total
NRF	6,144	97	78	6,319
Dispersal-only	1,594	35	128	1,757
Capable	5,236	1	4	5,242
Unsuitable	675	230	1,579	2,480
Non-Suitable*	0	20	278	298
Grand Total	13,649	383	2,067	**16,099**

* = Non-Suitable habitat represents habitat on lands other than BLM administered lands that was not classified as NRF, but was not further classified as dispersal, capable or unsuitable.

Table 2 depicts the current condition of the Action Area in terms of NSO habitat condition and land ownership patterns. A large amount (87%) of the Action Area is under federal ownership (Map 1). Approximately 39% of all the land found within the Action Area was classified as NRF habitat. The spatial distribution pattern of the NSO habitats present in the Action Area can be seen visually in Map 2. These habitat values were obtained from a BLM GIS (Geographical Information System) dataset developed and used for a more extensive owl analysis representing NSO habitat values across BLM lands (USDI BLM 2008).

2008 Critical Habitat

The Action Area does not contain any Critical Habitat as designated under the 2008 Critical Habitat designation.

1992 Critical Habitat

The Dead Stew project is located within a portion of the larger NSO Critical Habitat Unit OR-74 under the 1992 CHU designation (Map 1). OR-74 is located on the Medford District BLM and the Siskiyou National Forest. This unit provides the east-west connection along the southern portion of the Klamath Mountains Province. This region is highly fragmented from ownership patterns, geology, and past management practices. In its entirety, OR-74 contains approximately 32,190 acres, of which 10,547 acres are within the Action Area.

Under the 1992 Critical Habitat designation (USDI FWS 1992), approximately 10,547 acres (66%) of the Action Area is designated as Critical Habitat. All of the 1992 Critical Habitat located within the Action Area is located on lands administered by the Federal Government; 10,535 acres (99.9%) are under BLM administration, and 12 acres (0.1%) are administered by the US Forest Service.

The Proposed Action

The proposed action consists of treating numerous units of various size scattered across the BLM administered lands within the Action Area. Collectively, these units are part of the Dead Stew project. In total, approximately 515 acres (3.2% of the Action Area) would be treated under the Dead Stew project.

The overall goals of the Dead Stew project are to 1) reduce fuel loading and ladder fuels, 2) disrupt and reduce the continuity of fuels across the Action Area and 3) increase the residual stands resilience to wildfire and drought conditions, and 4) reduce stand densities and competition. The project was also designed to accomplish these goals while maintaining the habitat components that are important habitat features to NSOs.

There are a total of six (6) silvicultural prescriptions developed as part of the Dead Stew project. Each prescription is defined and discussed below.

Late Seral Emphasis - 60% Canopy Retention

Thin trees to one (1) to four (4) foot crown spacing, meaning there will be a one (1) to four (4) foot opening between the tips of branches of the remaining trees. The most vigorous dominant and codominant trees with the best crowns (greater than 30 percent crown ratio) will be left to maintain 60 percent or greater canopy cover. Trees targeted for removal will generally be 20-inches diameter at breast height (DBH) or smaller. Some trees greater than 20 inches may be removed to meet the objectives for retaining larger healthier and more fire resilient trees, removing insect and disease infested trees, safety and operational needs, and retaining and promoting fire resilient species. Pine and cedar trees greater than 30 inches DBH with 30% or greater crown ratios should have trees removed from beneath the canopy of the tree (within the dripline). This prescription would be implemented in NSO NRF and dispersal habitat types. Approximately 204 acres of the Dead Stew project would be treated with this prescription.

Late Seral Emphasis - 40% Canopy Retention

Thin from below to leaving the most vigorous dominant and codominant trees with the best crowns (greater than 30 percent crown ratio) to maintain 40 percent or greater canopy cover. Crown spacing would be 3 to 10 foot between crowns of trees. Favor fire resilient pine and incense cedar as leave trees over Douglas-fir. Pine trees that are suppressed or beetle infested would be thinned. This prescription would only be implemented in NSO dispersal habitat. Approximately 4 acres of the Dead Stew project would be treated with this prescription.

Dry Douglas-fir Treatments

Thin from below retaining the most vigorous dominant and codominant trees with the best crowns (greater than 30 percent crown ratio). Crown spacing would be five (5) to 15 foot between tree crowns. Create openings around individual pine or old-growth trees (no more than ¼ acre in size); leave healthy pine or incense cedar when they are available in the created opening. These group selections should be no closer than 250 feet between the edges of openings and other group selections. For the remaining area between openings, thin trees using the crown spacing prescription described above. This prescription would only be implemented in NSO dispersal or potential habitat types. Approximately 220 acres of the Dead Stew project would be treated with this prescription.

Moist Douglas-fir Treatments

Thin from below retaining the most vigorous dominant and codominant trees with the best crowns (greater than 30 percent crown ratio); thin stands to 3 to 10 feet between tree crowns. Retain some trees in the intermediate crown class to maintain structural diversity. This prescription would only be implemented in NSO dispersal or potential habitat types. Approximately 18 acres of the Dead Stew project would be treated with this prescription.

Douglas-fir and Pine Pole Stands Treatments

This prescription aims to thin areas of dense, decadent pole stands on dry sites would be thinned to a 3 to 15 foot crown spacing when possible. Focus on the removal of trees with less than 30 percent crown ratios (the percentage of the tree height with live green vegetation) and dying trees. This prescription would only be implemented in NSO dispersal or potential habitat types. Approximately 46 acres of the Dead Stew project would be treated with this prescription.

Pine Site Treatments

Thin stands to about a ten (10) to 25 foot spacing between the crowns of trees; leave all healthy dominant and codominant pine trees. Only pine trees that are intermediate or suppressed (less than 30 percent crown ratio), damaged, or beetle infested would be thinned. Create 1/5 to 1 acre openings around large pine trees. Leave healthy pine and all incense cedar trees in created openings. These group selections should be no closer than 150 feet between the edges of openings and other group selections. For the remaining area between openings, thin trees using the crown spacing prescription described above. This prescription would only be implemented in NSO dispersal habitat. Approximately 23 acres of the Dead Stew project would be treated with this prescription.

Table 3. The Acres of NSO Habitat to be treated under Each Prescription in the Dead Stew Project.

Prescriptions	NRF	Dispersal-only	Potential	Grand Total
Late Seral Emphasis (60% Canopy Retention)	180	24	0	204
Late Seral Emphasis 40% Canopy Retention	0	4	0	4
Dry Douglas-fir	0	127	93	220
Moist Douglas-fir	0	3	15	18
Doug-fir and Pine Pole Stands	0	25	21	46
Pine Site	0	23	0	23
Grand Total	180	206	129	**515**

Table 3 depicts the number of acres of each prescription that would occur in each NSO habitat type under the Dead Stew project. The Dead Stew project would treat 180 acres (2.8%) of the 6,319 acres of NRF habitat and 386 acres (4.8%) of the 8,076 acres of all dispersal habitat (NRF and dispersal-only combined) present in the Action Area. Map 3 depicts the location of each treatment area included under the Dead Stew project, and the spatial location of the treatment areas in relation to NSO sites in the Action Area.

The proposed actions conform to the *Final Supplemental Environmental Impact Statement and Record of Decision for Amendments to the Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (Northwest Forest Plan SEIS 1994 and ROD 1994) and the *Final Medford District Proposed Resource Management Plan/ Environmental Impact Statement* and *Record of Decision* (EIS, 1994 and RMP/ROD 1995). If management for the resource changes due to binding legal direction that might be issued before these projects are fully implemented, the more restrictive management would be implemented.

III. EFFECTS OF THE PROPOSED ACTION

Direct and Indirect Effects

Effects to NSO NRF Habitat

All of the proposed treatments under the Dead Stew project are considered "treat and maintain" treatments, and would not downgrade or remove any NSO habitat. The Dead Stew project would treat 180 acres (2.8%) of the 6,319 acres of NRF habitat present in the Action Area. All of the stands that were classified as NRF in the Dead Stew project that will receive treatments are located outside of NSO nest patch and core areas. Of the 180 acres of NRF habitat that will be treated, 97 acres (54%) fall within a homerange one (1) or more of the NSO sites located within the Action area, and 83 acres (46%) of these treatments are outside of all NSO homeranges found within the Action Area (Map 3).

Light to moderate thinning will reduce the average canopy cover of the stand to no less than 60 percent. Selective harvest may affect NRF habitat by removing some horizontal and vertical structure. Components important to spotted owls such as nest trees, multi-layered canopies, and dead and down wood that support prey species habitat will remain within all treatment areas post-harvest, retaining the ability to provide for the nesting, roosting, foraging and dispersal of spotted owls. The BLM has determined effects to spotted owls as a result of treating and maintaining 180 acres of NSO NRF habitat will be insignificant and *may affect, are not likely to adversely affect* spotted owls for the following reasons:

- Canopy cover will be maintained at 60 percent or greater at the stand level, a value important for the continued use of stands by spotted owls.
- Decadent woody material, such as large snags and down wood which provide habitat for spotted owl prey species, will remain post-treatment.
- All multi-canopy, uneven aged tree structure that was present pre-treatment will remain post-treatment.
- Treatments within stands of spotted owl NRF habitat will be distributed both spatially and temporally throughout the Action Area.
- No nest trees will be removed.
- No NRF treatments will occur within the nest patch or core area associated with any NSO.
- Treatments are expected to improve the ecological health of treated stands, stimulate forage plants important to spotted owl prey species, reduce the chance of tree loss due to suppression mortality because the stand has more trees than the site can support over the long-term, and will reduce the intensity and risk of wildfire by removing excess fuels.
- Treatments will not occur within the nest patch of any known or predicted spotted owl site.
- Implementation of mandatory PDC that restrict activities within the critical breeding season (March 1 through June 30) as well as beyond the recommended disturbance/disruption thresholds (Appendix A) will avoid adverse disturbance to spotted owls.

Effects to NSO Dispersal Habitat

All of the proposed treatments under the Dead Stew project are considered "treat and maintain" treatments, and would not downgrade or remove any NSO habitat. The Dead Stew project would treat 386 acres (4.8%) of the 8,076 acres of all dispersal habitat (NRF and dispersal-only combined) present in the Action Area.

Implementation of the proposed action within spotted owl dispersal habitat is not anticipated to diminish the ability of spotted owls to move through treated stands. The BLM anticipates these treatments will cause an indirect beneficial effect for spotted owls by accelerating the development of late-successional elements, such as large diameter trees, multiple canopy layers, flying space and hunting perches in the long term. The additional light in the stand improves vigor of residual trees, but can also provides light to some of the forage plants important to spotted owl prey, if structural components are retained to provide prey cover habitat.

Additionally, snag and coarse woody debris remaining in treated stands post-treatment will help minimize impacts to spotted owl prey species that utilize these features. Residual young trees rapidly respond to increased space and light following treatment and develop increased bole and crowns. Suppression mortality, a condition where unnaturally crowded trees suppress growth and viability of those trees, will be avoided. Wildfire resiliency will be improved. Remaining trees will have more water, space and light to be healthier and grow faster, and develop more structural diversity.

The BLM has determined effects to spotted owls as a result of treating and maintaining 206 acres of NSO dispersal-only habitat will be insignificant and *may affect, are not likely to adversely affect* spotted owls for the following reasons:

- Canopy cover in treated stands will be maintained at 40 percent.
- Decadent woody material, such as large snags and down wood will be maintained during these treatments.
- Very dense stands will be opened by thinning, thereby improving conditions for dispersing spotted owls.
- Thinning treatments are designed to reduce the rate of spread and intensity of wildland fires common to the action area.
- No nest trees will be removed.
- All spotted owl nest patches will be avoided.
- Implementation of mandatory PDC will avoid adverse disturbance to spotted owls.

Effects to Spotted Owl Prey Species

The proposed harvest and vegetation treatments are likely to maintain or improve foraging habitat conditions for spotted owl prey species. Lemkuhl et al. (2006a, 2006b) confirmed the importance of maintaining snags, down wood, canopy cover, and mistletoe to support populations of spotted owl prey species. Gomez et al. (2005) noted that commercial thinning in

young stands of coastal Oregon Douglas-fir (35-45 yr) did not have a measurable short-term effect on density, survival or body mass of northern flying squirrels, an important prey species for spotted owls. Gomez et al. (2005) also noted the importance of fungal sporocarps, which were positively associated with large down wood.

Residual trees, snags and down wood that are retained in the thinned stands will provide some cover for prey species over time, and will help minimize harvest impacts to some prey species. Some arboreal prey species will venture into harvest units a short distance for food. Spotted owls seldom venture far into non-forested stands to hunt. However, edges can be areas of good prey availability and potentially increased vulnerability (i.e., better hunting for spotted owls) (Zabel et al.1995). The retained trees may respond favorably to more light and resources and gain height and canopy over time.

The proposed project considered herein is designed to maintain existing spotted owl habitat at the stand level, while improving ecological sustainability and reducing fire risks. Treatments are also designed to retain habitat for spotted owl prey, such as retention of snags and understory development. However, spotted owl prey animals may be more exposed in treatment areas, or may move away from the area over the short term. As prey move around in response to the proposed treatments they may become more vulnerable and exposed to predation by spotted owls. The disturbance might attract other predators such as other owls, hawks and mammalian predators, which may increase competition for spotted owls in the treatment area.

Some changes to habitat features caused by the proposed action may improve forage conditions for spotted owls, provided under-story structure and cover are retained. Removal of some tree canopy, provided it is not too extreme, will bring more light and resources into the stand, stimulating forbs, shrubs and other prey food. Once the initial impact of disturbance recovers (6 months to two years), the understory habitat conditions for prey food would increase over the next few years, until shrubs and residual trees respond to close in the stand.

Overall, the spacing, timing and prescriptions included in the Dead Stew project are likely to avoid adverse impacts to spotted owls with respect to prey availability by retaining habitat features in treated stands that support prey species populations although localized, short-term changes in prey species distribution and abundance are likely to occur within a treated stand. The dispersion of treatment sites over a large area is especially important in maintaining spotted owl prey populations within the action area. On this basis, the BLM has determined effects to spotted owl prey, as described here, would be insignificant.

Effects to Spotted Owls due to Disturbance

The implementation of portions of the Dead Stew project may have the potential to result in noise which could carry into occupied spotted owl habitat. The application of mandatory PDC during implementation is anticipated to result in the avoidance of adverse noise disturbance to spotted owls. Additional conservation measures may be implemented at the site specific, project level by interdisciplinary teams during project reviews.

The Dead Stew project was designed to avoid adverse impacts from noise and disturbance to spotted owls. The District plans to implement mandatory PDC (Appendix A), which require distance and timing restrictions designed to reduce disturbance to spotted owls. Therefore, the BLM has determined effects to spotted owls due to disturbance associated with the implementation of the proposed action *may affect, are not likely to adversely affect* spotted owls.

Effects to Spotted Owl Critical Habitat

Due to on-going litigation regarding designated critical habitat for the spotted owl, this Assessment analyzes potential impacts to spotted owl critical habitat designated in 2008 (USDI FWS 2008b) as well as that previously designated in 1992 (USDI FWS 1992). However, as there is no 2008 Critical Habitat present in the Action Area, this analysis only examines the effects to the 1992 designation. There would be no effect to the 2008 Critical Habitat as a result of implementing the Dead Stew project.

The Dead Stew project would treat and maintain 170 acres of spotted owl NRF habitat, and 177 acres of dispersal-only habitat within a designated 1992 critical habitat unit. Activities planned include timber harvest (through light thinning), fuels reduction and hazard tree removal activities (as described more fully under the Proposed Action). In total, the Dead Stew project would impact 347 acres (or 1.1%) of the total land within CHU OR-74.

Implementation of these activities will not decrease the primary constituent elements of spotted owl NRF habitat because the function of the treated stands will be maintained. The BLM anticipates nesting, feeding, sheltering and dispersal conditions of pre-treatment spotted owl NRF habitat will be retained, and, in many cases, improved. The effects from the Dead Stew project will be insignificant and *may affect, is not likely to adversely affect* spotted owl NRF or dispersal habitat within designated critical habitat because:

- No primary constituent elements will be reduced in quantity or quality.
- There will be no change in the amount of spotted owl NRF or dispersal-only habitat in the affected critical habitat unit.
- There will be no change in the amount of spotted owl dispersal habitat in the affected CHU.
- Canopy cover within treated stands of spotted owl NRF habitat will be retained at 60 percent or greater, allowing for the continued nesting, roosting and foraging of spotted owls within treated stands.
- Canopy cover within treated stands of spotted owl dispersal-only habitat will be retained at 40 percent or greater, allowing for the continued dispersal of spotted owls throughout treated stands.
- Very dense stands will be opened by thinning, improving conditions for dispersing spotted owls.
- Decadent woody material in the treatment areas, such as large snags and down wood, will remain post-treatment, providing habitat for spotted owl prey species.
- Multi-canopy, uneven-aged tree structure present prior to treatments will remain post-treatment, providing important habitat features of spotted owl NRF habitat.
- Post treatment structural conditions will maintain habitat conditions for spotted owl prey species, particularly woodrats, in treatment areas.

- No spotted owl nest trees will be removed.
- Treatments will be distributed both spatially and temporally within the affected CHUs.
- Treatments will not occur within the nest patch of any known or predicted spotted owl site.

In Addition, the BLM anticipates beneficial effects which may result from the implementation of the Dead Stew Project:

- Improved ecological condition of treated stands.
- Reduction in the chance of tree loss due to suppression mortality.
- Reduced risk of stand loss due to wild land fires.
- Increase in the amount of forage plants important to spotted owl prey species.

NSO Recovery Plan

The Service finalized the Recovery Plan for the northern spotted owl on May 13, 2008 (USDI FWS, 2008a). Recovery plans are not regulatory documents; rather, they provide guidance to bring about recovery and establish criteria to be used in evaluating when recovery has been achieved. BLM continues to work with the Service to incorporate Recovery Goals and Actions that are consistent with BLM laws and regulations.

Recovery Action 32

Recovery action 32 recommends "maintaining substantially all of the older and more structurally complex multi-layered conifer forests on all Federal lands outside of Managed Owl Conservation Areas" (USDI FWS, 2008a). All the units included as part of the Dead Stew project were assessed in the field utilizing the protocol developed for the administrative units of the Rogue-River Siskiyou National Forest and the Medford District BLM by an interagency, interdisciplinary team for delineating and/or validating "high quality habitat" (Recovery Action 32, structurally complex forest) for project level planning (USDA USDI 2010). Approximately 5 acres of one unit were identified as structurally complex, and subsequently dropped from the project.

Summary and Conclusions

The Ashland Resource Area of the Medford BLM has determined that the treatments described in this Assessment would not reduce the amount of spotted owl habitat within the Action Area. All of the proposed treatments under the Dead Stew project are considered "treat and maintain" treatments, and would not downgrade or remove any NSO habitat. Components important to spotted owls such as nest trees, multi-layered canopies, and dead and down wood that support prey species habitat will remain within all treatment areas post-harvest, retaining the ability to provide for the nesting, roosting, foraging and dispersal of spotted owls. The BLM anticipates nesting, feeding, sheltering and dispersal conditions of pre-treatment spotted owl NRF habitat will be retained, and, in many cases, improved. Implementation of the Dead Stew project would not adversely affect any Critical Habitat because the amount and function of the primary

constituent elements located within the treated stands will be maintained. The disturbance related to the projects in this Assessment would be avoided by incorporating distance or seasonal PDCs to avoid adverse effects from noise. The Dead Stew project described in this BA "*may affect and is not likely to adversely affect*" (NLAA) spotted owls, or their designated Critical Habitat.

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APPENDIX A. PROJECT DESIGN CRITERIA

Project design criteria *(PDCs)* are measures applied to project activities designed to minimize potential detrimental effects to proposed or listed species. Use of project design criteria may result in a determination of no effect for a project which would have otherwise been not likely to adversely affect. In other cases, project design criteria have resulted in a determination of not likely to adversely affect for a project which might have otherwise been determined to be likely to adversely affect. The goal of PDCs is to reduce adverse effects.

Physical impacts to habitat and disturbances to spotted owls would be reduced or avoided with PDC. Listed are project design criteria designed for the programmatic impacts discussed in the *Effects of the Action* section.

The Ashland Resource Area of the Medford BLM retains discretion to halt and modify all projects, anywhere in the process, should new information regarding proposed and listed threatened or endangered species arise. Minimization of impacts might then, at the least, include an appropriate seasonal restriction; and could include establishment of buffers, dropping the unit(s)/portions, or dropping the entire project.

The seasonal or daily restrictions listed below may be waived at the discretion of the decision maker if necessary to protect public safety. Emergency consultation with the Service would then be initiated in such cases, where appropriate.

PDCs for disturbance are intended to reduce disturbance to potentially nesting spotted owls. For this consultation, potential disturbance is avoided to either documented owl sites or areas with suitable nesting habitat that have not been surveyed for spotted owls.

Any of the following mandatory spotted owl PDCs may be waived in a particular year if spotted owl nesting or reproductive success surveys conducted according to the Service-endorsed survey guidelines reveal that birds are non-nesting or that no young are present that year. Waivers are valid only until March 1 of the following year. Previously known spotted owl sites/activity centers are assumed occupied until protocol surveys indicate otherwise.

Mandatory Project Design Criteria for Spotted Owls

Activities (such as slashing, yarding or other heavy equipment operations) that produce loud noises above ambient levels would not occur within 105 feet of any documented or computer generated owl site between March 1 and June 30 (or until two weeks after the fledging period), unless protocol surveys have determined the activity center to be not occupied, non-nesting, or failed in their nesting attempt. For chainsaws, the buffer distance would be 195 feet. The distances may be shortened if topographical breaks muffle sound traveling between the work location and nest sites.

The action agency has the option to extend the restricted season until September 30 during the years of implementation, based on site-specific knowledge (such as a late or recycle nesting attempt), if the project would cause a nesting spotted owl to flush. (See disturbance distance).

Burning would not take place within 0.25 miles of spotted owl sites between 1 March and 30 June (or until two weeks after the fledging period) unless substantial smoke would not drift into the nest stand.

Above-ambient noises further than these are expected to have either negligible effects or no effect to spotted owls. The types of reactions that spotted owls could have to noise that the Service considers to have a negligible impact, include flapping of wings, the turning of a head towards the noise, hiding, assuming a defensive stance, etc. (USFWS 2003b).

Appendix B: NATIONAL FIRE PLAN PROJECT ESA COMPLIANCE STATEMENT

PROJECT COMPLIANCE WITH THE ENDANGERED SPECIES ACT CONSULTION REQUIREMENTS, USING THECOUNTERPART CONSULTATION REGULATIONS BUREAU OF LAND MANAGEMENT

PROJECT NAME: Dead Stew
STATE: Oregon
BLM State Office: Oregon
BLM District (if Applicable): Medford
Field Office: Ashland RA
DATE OF COMPLETED BE or BA: July 30, 2010
NAME OF JOURNEY LEVEL BIOLOGIST, BOTANIST OR ECOLOGIST WHO ENSURED THE ADEQUACY OF THE BE or BA: Jason Reilly

As proposed this project is within the scope of, and will support, the National Fire Plan, because:

The Dead Stew project will 1) reduce fuel loading and ladder fuels, 2) disrupt and reduce the continuity of fuels across the Action Area and 3) increase the residual stands resilience to wildfire and drought conditions, and 4) reduce stand densities and competition.
The Not Likely to Adversely Affect (NLAA) effects analysis completed and documented in the above BA was done under the Section 7 counterpart regulations of the Endangered Species Act (Federal Register, December 8, 2003), and is in compliance with those regulations and the March 3, 2004 Alternative Consultation Agreement between the Bureau of Land Management, FWS and NMFS.

SIGNATURE OF LINE OFFICER: _____

NAME OF LINE OFFICER: John Gerritsma

TITLE OF LINE OFFICER: Field Manager

DATE: 8/4/10

Appendix C: Procedural Checklist to Certify that Procedural Requirements Have Been Met, Pursuant to the ACA

(To be prepared by each Field or District Office for use by the Monitoring Team)

State: Oregon

Name of District or Field Office: Medford

Date: 8/4/10

Certifying Line Officer: John Gerritsma

Criterion
Consulting and Reviewing Biologists have:

1. Access to current published biological and ecological Information — Yes No

2. Access to current published biological and ecological information relevant to the conservation of the threatened and endangered species and designated critical habitat — Yes No

3. Access to information on the methods and procedures for environmental assessments — Yes No

4. Access to current information on the environmental consequences of human actions on threatened and endangered species and designated critical habitat — Yes No

5. Access to current information on the success or failure of actions intended to minimize affects on threatened and endangered species and designated critical habitat — Yes No

6. Access to continued agency training and guidance on section 7 — Yes No

7. Access to biological assessment template and other tools where applicable (e.g., Northwest regional consultation tools) — Yes No

Appendix D: Evaluation of Determination of Effects Documents that Support NLAA Determinations

(To be used by the Monitoring Team)

Action Agency _____Name of Subunit _____

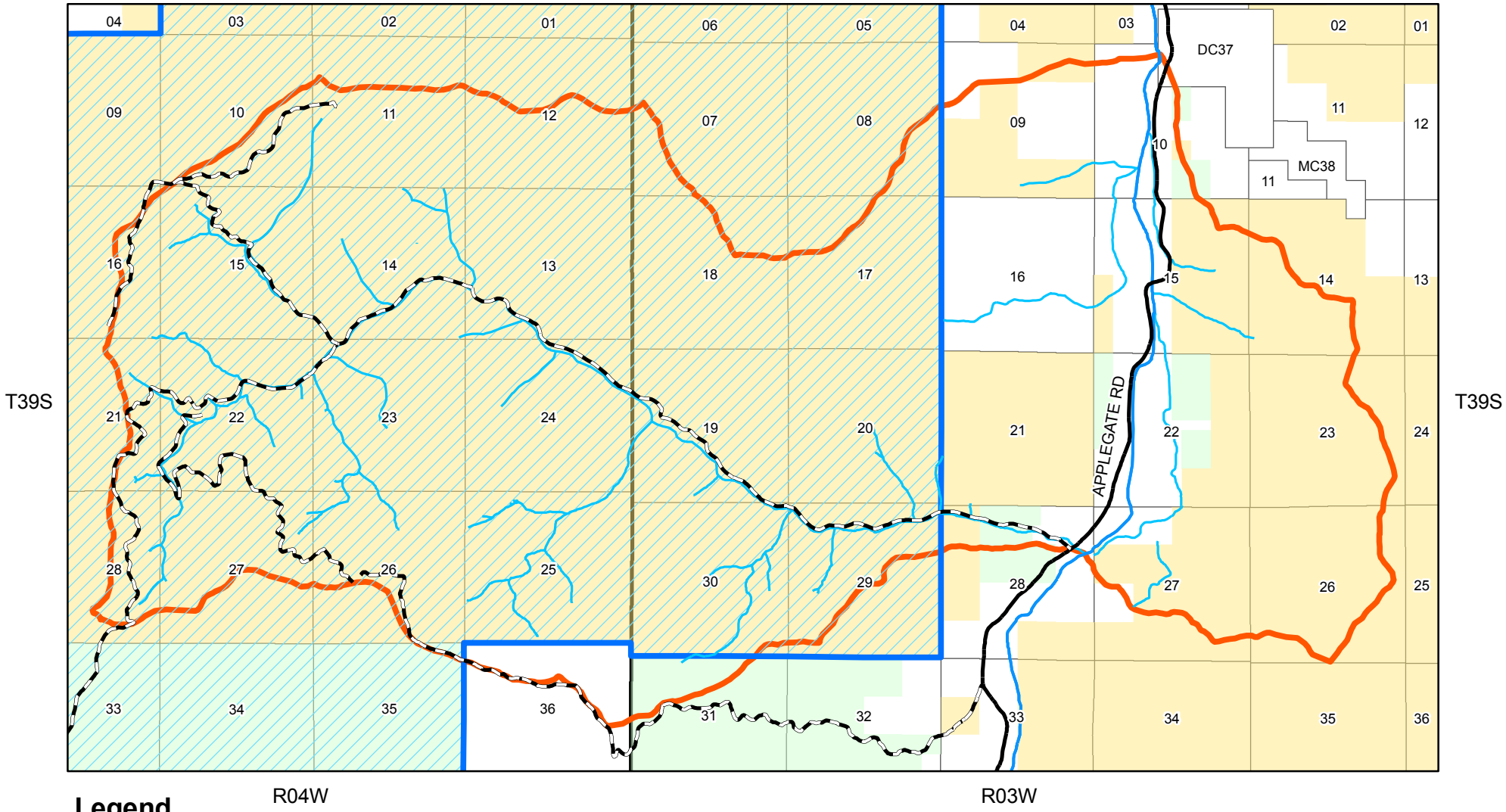
Name of Project_____

Team Representative _____ Date _____

Product/Criterion

1. Identifies proposed action clearly (includes a description of the various components of the action)	Yes	No
2. Identifies spatial and temporal patterns of the action's direct and indirect environmental effects, including direct and indirect effects of interrelated and interdependent actions	Yes	No
3. Identifies Action Area clearly (based on information in 2)	Yes	No
4. Identifies all threatened and endangered species and any designated critical habitat that may be exposed to the proposed action (includes a description of spatial, temporal, biological characteristics and constituent habitat elements appropriate to the project assessment)	Yes	No
5. Compares the distribution of potential effects (identified in 2) with the threatened and endangered species and designated critical habitat (identified in 4) and establishes, using the best scientific and commercial data available, that (a) exposure is improbable or (b) if exposure is likely, responses are insignificant, discountable, or wholly beneficial	Yes	No
6. Determination is based on best available scientific and commercial information	Yes	No

MAP 1 - Land Ownership Patterns in the Dead Stew Action Area



Legend

Action Area - Star Gulch Applegate River 6th field Subwatershed

Critical Habitat Unit OR-74 (1992 CHU)

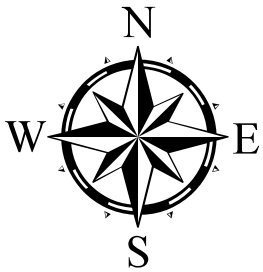
Ownership

Bureau of Land Management

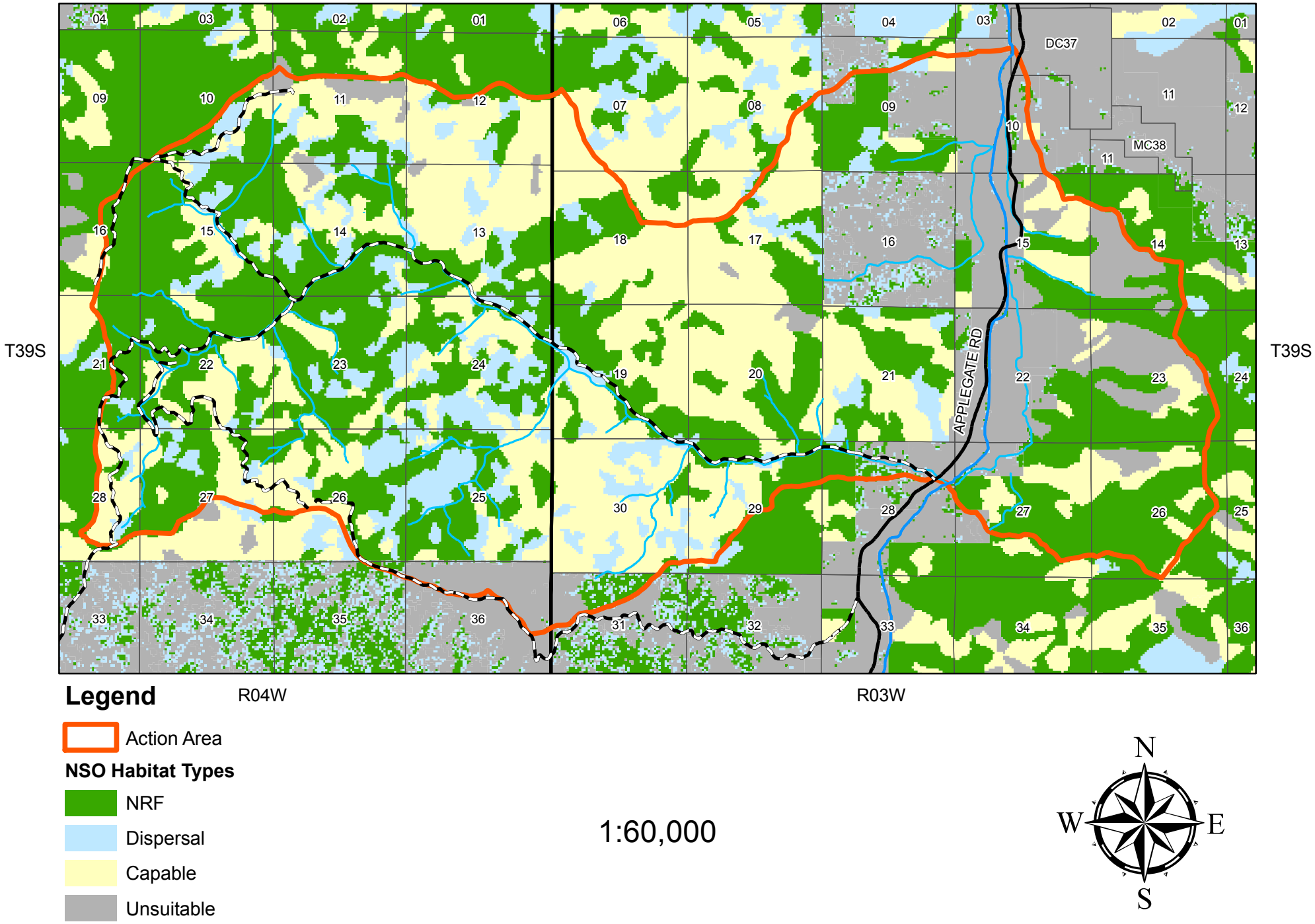
U.S. Forest Service

Private Individual or Company

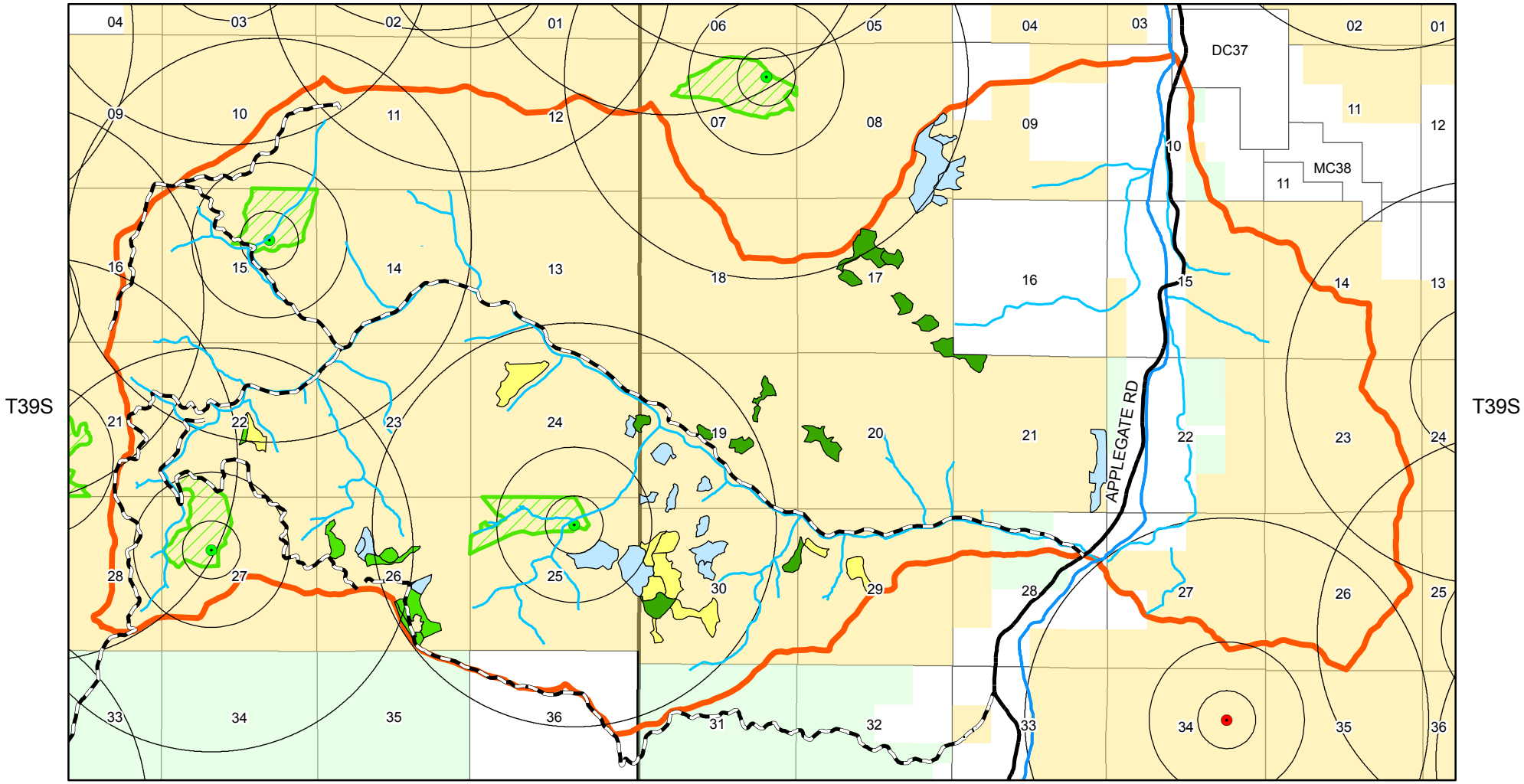
1:60,000



MAP 2 - Spotted Owl Habitat Patterns in the Dead Stew Action Area



MAP 3 - Dead Stew Project Unit Locations and NSO Locations



Legend

- Action Area
- **Dead Stew Project Units**
- **NSO Habitat Type**
  - NRF
  - Dispersal
  - Potential
- NSO Known Sites
- NSO Generated Sites
- Nest Patch
- Core
- Home range
- NSO 100 Acre Cores

1:60,000

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