



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
445 West Gunnison Ave, Suite 240
Grand Junction, Colorado 81501-5711

IN REPLY REFER TO:

ES/CO: FS/Divide RD, RGNF

BO: ES/LK-6-CO-08-F-024-GJ015

TAILS 65413-2009-B-0008/06E24100-2015-F-0094

June 16, 2015

Dan Dallas
Forest Supervisor
Rio Grande National Forest
1803 West Highway 160
Monte Vista, Colorado 81144

Subject: Section 7 Consultation for the Poage Lake Project

Dear Mr. Dallas:

This responds to your March 18, 2015, letter to the Fish and Wildlife Service (Service) requesting formal Section 7 consultation on the effects of the subject project to species and habitats listed under the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 et seq.; [Act]). The project described in your letter and the accompanying biological assessment (BA), occurs on the Divide Ranger District, Rio Grande National Forest (RGNF). We received your request on March 23, 2015.

The Forest Service determined that one federally listed may be affected by the proposed action.

We agree with your determination that the proposed action may affect, and is likely to adversely affect Canada lynx (*Lynx canadensis*) (lynx). The effects of the proposed action tier to the analysis of effects contained in our programmatic biological opinion (PBO) for the Southern Rockies Lynx Amendment (SRLA).

On August 20, 2008, the Service issued the PBO (ES/LK-6-CO-08-F-024) for the effects of the SRLA on the Distinct Population Segment of lynx in the contiguous United States, in accordance with section 7 of the Act. The analysis presented in the PBO was programmatic in scope and was identified as the “first-tier” of a tiered consultation framework, with the review of subsequent projects that may affect lynx as being the second-tier of consultation. Second-tier biological opinions (BOs) will be issued, as appropriate, in cases where proposed actions that are likely to cause adverse effects to lynx that were not fully analyzed in the first-tier (i.e., programmatic) BO.

In the SRLA Record of Decision, dated October 2008, a limited range of fuel reduction or timber management activities conducted within the wildland urban interface, and other limited vegetation management activities for other resource benefits, fell under exemptions or exceptions of SRLA standards VEG S1, S2, S5, and S6. In our first-tier BO, a “worst case” scenario approach was used to aggregate the effects of activities relying on exemptions or exceptions to SRLA standards over a 15-year period. We were able to provide a programmatic level incidental take statement for these activities, because the Forest Service provided explicit estimates of the number of acres of habitat impacted under the exceptions and exemptions to SRLA standards. We used the estimate of the acres treated during the 15-year period as a surrogate to quantify incidental take. We recognized that individual projects relying on exemptions or exceptions to SRLA standards could result in a range of effects including, insignificant and/or discountable effects, adverse effects, and take. In our first-tier BO, we concluded that the additive effects of projects using exemptions and exceptions would result in take of lynx at the programmatic level, but that adverse effects and take would not automatically result from individual projects under the SRLA. The reporting requirements contained in our first-tier BO ensures that the aggregation of individual project impacts would not “add-up” to levels that exceed the amount of incidental take we anticipated in the first-tier incidental take statement.

Proposed Action

The proposed action consists of vegetation management to salvage dead and dying Engelmann spruce trees killed by spruce bark beetles, on up to 515 acres, hazard trees removal of approximately 35 acres, reopening of 1.2 miles of temporary roads, up to 1.8 miles of new temporary road construction, and 2.56 acres of road decommissioning within the project area. The project is located in Rio Grande County, Colorado (BA Figure 1).

Conservation Measures

Conservation measures - are actions to benefit or promote the recovery of listed species that are included by the Federal agency as an integral part of the proposed action. These actions will be taken by the Federal agency or applicant, and serve to minimize or compensate for, project effects on the species under review. These may include actions taken prior to the initiation of consultation, or actions which the Federal agency or applicant have committed to complete in a biological assessment or similar document.

The proposed action includes a number of design criteria (conservation measures) to minimize effects to various resources. The proposed action includes the following conservation measures to minimize effects of the action on lynx.

- Minimize damage to areas containing live advanced regeneration.
- Locate skid-trails and landings to minimize impacts to advanced regeneration. Skid-trails will be at least 100 feet apart (except where then converge at landings).
- Locate landings and slash piles in open areas.
- Harvest activities will not occur between May 1 and June 30.

Environmental Baseline

The environmental baseline consists of the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process (50 CFR § 402.02).

The environmental baseline for lynx is partially evaluated, among other things, against vegetation standard one (VEG S1) of the SRLA. We use this standard as a means for determining whether the lynx analysis unit (LAU) contains sufficient lynx habitat in a suitable (functioning) condition to support survival (feeding) and reproduction of lynx. The LAU approximates the size of a female lynx home range. Our current understanding of lynx home ranges suggests that at least 70 percent of the lynx habitat within a LAU should be in a suitable (functioning) condition, and the suitable habitat supports a high density of snowshoe hare (*Lepus americanus*) to support a resident lynx year-round. In addition to VEG S1, other natural and man-caused factors may reduce prey abundance within the action area. These impacts include bark beetle infestations, or vegetation management activities. Bark beetle infestations, depending on the severity and geographic extent, and vegetation management, cause losses of mature cone-bearing trees, which may reduce the abundance of red squirrels. Vegetation management removes the structural and foraging components of lynx habitat at varying scales, reducing the carrying capacity of the habitat for lynx prey. In combination, bark beetle activity and past vegetation management may significantly reduce prey abundance within a LAU, potentially reducing productivity of a lynx occupying a home range.

The action area for the proposed action consists of the Trout–Handkerchief LAU. Human uses within the action area include past timber harvest, grazing, and dispersed recreation. The LAU contains the Wolf Creek Ski Area and is bordered on the northwest by US Highway 160. One additional project having undergone section 7 consultation is a private development at the base of Wolf Creek Ski Area.

Lynx Habitat

The Trout–Handkerchief LAU contains 78,171 acres of lynx habitat, including 1,031 acres in the stand initiation structural stage (i.e. unsuitable condition). These statistics demonstrate that the Trout–Handkerchief LAU meets the minimum habitat requirements, as stated above, to support lynx survival and recovery. However, the BA indicates spruce bark-beetle activity within the action area. Loss of mature cone-bearing spruce trees, due to bark-beetle activity at large spatial scales, may significantly reduce red squirrel density, the lynx's primary alternative prey. Little research has addressed how red squirrels respond to insect infestation (Koprowski et al. 2005). However, research concluded that red squirrel populations declined significantly in areas with >40 percent mortality of spruce trees due to beetle infestations in Alaska (Matsouka et al. 2001, and Colorado Yeager and Riordan, 1953; cited in Koprowski et al. 2005). When snowshoe hare densities decline, lynx rely heavily on red squirrels for survival, but a diet of red squirrels alone may not be adequate to ensure lynx reproduction and survival of kittens (Koehler 1990, cited in Ruediger et al. 2000). During snowshoe hare population lows, and if their main alternative prey

(red squirrels) is not available, or is at very low densities resulting from mature spruce mortality, lynx may not produce kittens, may expand or abandon their home range in search of prey in order to survive, or starve to death. Other areas currently having sparse understory may become relatively non-functional habitat for some time, which lynx may traverse to access higher quality habitat where prey may be more abundant. Reduced foraging and denning habitat in the spruce zone negatively influences the ability of lynx to maintain a home range within the LAU and connected LAUs over the moderate term, including the period of forest recovery from project implementation (20-30 years), until adequate forested cover redevelops to provide year-round habitat for hares.

The Forest Service has implemented actions using exemptions and/or exceptions to SRLA standards. As stated in the BA, the RGNF has approximately 3,202 acres remaining under their forest-wide cap for treatments using exceptions to VEG S6. In addition, the Forest Service has approximately 26,085 acres remaining under exemptions for wildland urban interface treatments.

The Trout-Handkerchief LAU does not appear to be significantly affected by past management activities given the low incidence of stand initiation structural stage (SISS) conditions. It is not clear to what extent the spruce bark-beetle epidemic has affect lynx habitat within the Rio Archuleta LAU, but given the nature of the proposed action, we assume that substantial tree mortality is present. An impact to overstory trees such as beetle caused mortality is unlikely to negatively affect young trees in the understory that provides habitat for snowshoe hare and lynx. However, loss of mature spruce trees may cause significant reductions in alternative prey availability (i.e. red squirrels) which may reduce the capability of the Rio Archuleta LAU to support survival and reproduction of lynx.

Effects of the Action

The effects of the proposed action tier to the effects analysis contained in the first-tier BO, and fall into two categories. Category 1 effects include project components that are within the scope of the SRLA, requires use of an exemption and/or exception to SRLA standards, and the effects are consistent with those anticipated, analyzed, and quantified in the first-tier BO. Category 2 effects include project components that are permissible under the SRLA, but do not require exemptions or exceptions to SRLA standards. We analyzed the effects of category 2 project components in the first-tier BO, because the effects do not differ from category 1 components. Category 2 effects are not quantified, and these effects do not require reporting under the first-tier BO. However, category 2 effects do contribute to negative effects to lynx and are additive to the effects documented in the PBO.

The proposed action requires use of exemptions or exceptions to Forest Plan standards for implementation (Category 1). Salvage harvest activities where VEG S6 applies will result in reduction of 121 acres of snowshoe hare habitat, increasing the total acres used under the Forest's cap, leaving 3,081 acres available for future exceptions to VEG S6.

Category 2 effects resulting from the proposed action include salvage treatments that will render vegetation to the stand initiation structural stage. In addition, salvage activity is proposed within stands where VEG S6 does not apply (i.e. 90 percent or greater overstory mortality, or the stand does not contain horizontal cover of at least 35 percent), but will remain in a suitable condition after treatment. The proposed action will result in; 79 acres of habitat in a suitable condition converted to the stand initiation structural stage (i.e. unsuitable condition); 403 acres of salvage harvest resulting in snowshoe hare habitat reduction; 33 acres of treatment within stands that are already in an unsuitable (non-functioning) condition; and an estimated 3 acres of habitat conversion to unsuitable from temporary road construction/ reconstruction. In total, the proposed action will impact approximately 515 acres of lynx habitat through salvage related activity, further reducing the capability of the LAU to support a lynx home range. The proposed action will also result in approximately 35 acres of hazard tree removal activities within and near high-use areas around Poage Lake. The hazard tree removal targets trees categorized as a hazard to human safety. The BA did not anticipate impacts to dense horizontal cover within this portion of the project and likely will have limited additional impacts to lynx or lynx prey.

Conversion of suitable habitat to the SISS condition within the individual LAUs will not exceed five percent (Table 11 in BA), which is within the Forest Plan standard (i.e. VEG S1), and Lynx Conservation Assessment and Strategy (Ruediger et al. 2000, Interagency Lynx Biology Team 2013) recommendations. In addition, past management actions have not resulted in SISS conditions within the LAUs within the last 10 years. The proposed action will increase SISS conditions under VEG S2, but will not exceed Forest Plan standard VEG S2.

The proposed action will result in the presence of humans within or near functional lynx habitat. We do not consider human presence within lynx habitat detrimental to lynx. Lynx are likely to avoid most human activity, but it is possible that a lynx could be disturbed when activities occur near where they are resting or possibly hunting. However, we conclude that disturbance effect is insignificant and discountable.

The proposed action includes conservation measures, described above, that serve to minimize the effects of the proposed action. The conservation measures will guide project activities to minimize impact to areas of dense understory development, providing foraging opportunities for lynx, and allow the forest to fully regenerate more quickly. In addition, the measures will ensure that habitat connectivity is maintained within and between the LAUs by providing vegetated travel corridors preferred by lynx.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this BO. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. The BA documented that there are no State, private or Tribal actions within the action area that are reasonably certain to occur.

Conclusion

The proposed action will affect lynx within the Trout-Handkerchief LAU as described above. The species response to vegetation management activities is consistent with the effects analyzed in the first-tier BO. We believe that the effects of the proposed action will not result in take of lynx beyond what we quantified in the first-tier BO.

The incidental take statement in the first-tier BO required the Forest Service to prepare and maintain an up-to-date record documenting the following: 1) contract year; 2) the amount of lynx foraging habitat impacted; 3) the size of the units treated; and 4) the location in which harvest or pre-commercial thinning of lynx foraging habitat occurred. The Forest Service must submit an updated record with this information with each second tier review and submit a final record to the Service's Colorado Field Office by April first of each year for the preceding fiscal year. We look forward to receiving your report.

The Service bases our conclusions on the information and analyses contained in the project BA, and our August 20, 2008, BO (BO # ES/LK-6-CO-08-F-024GJ), and the information we relied upon to develop the opinion.

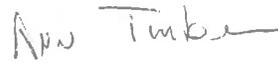
As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take anticipated in the first-tier BO is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in the first-tier opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the first-tier opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease, pending reinitiation.

Conservation Recommendation

We recommend that skid trails and landings be treated in some way (i.e. ripping of the soil, disking, etc.) to break up soil compaction resulting from logging activities to provide for a more suitable seedbed for future regeneration. We have observed on numerous site visits that skid trails and landing sites generally do not support dense vegetative regeneration, and/or is not as vigorous and dense as adjacent areas within the stand. Skid trails and landings are generally considered by the Forest Service to be a temporary impact, assuming that the vegetation will recover similar to adjacent areas. However, we believe that skid trails and landings tend to be more permanent and do not regenerate along with adjacent vegetation, thus fragmenting forested habitat. We recommend that the Forest Service require operators to take implement actions to break up areas of compacted soils to encourage consistent regeneration throughout the stand.

We want to recognize and commend the Forest Service for using its authority to minimize the effects of the action for the sake of lynx conservation. We recognize the significant reduction in the effects of a larger project. We appreciate your efforts to ensure the conservation of threatened and endangered species. If you have questions or comments related to this issue, please contact Mr. Kurt Broderdorp at (970) 628-7186.

Sincerely,



Ann Timberman
Western Colorado Supervisor

Pc: Peter McDonald, USFS, R2, petermcdonald@fs.fed.us

Literature Cited

Interagency Lynx Biology Team. 2013. Canada lynx conservation assessment and strategy. 3rd edition. USDA Forest Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, and USDI National Park Service. Forest Service Publication R1-13-19, Missoula, MT. 128 pp.

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