

3.11 THREATENED/ENDANGERED AND SENSITIVE SPECIES (TES)

3.11.1 Summary

Threatened Species- Canada Lynx

Alternatives 2, 3 and 4 would consolidate off-highway vehicle (OHV) use, and improve habitat in most Lynx Analysis Units (LAUs) through a net reduction of roads open to motor vehicles. Alternative 4 would be most beneficial (greatest reduction) followed by Alternative 2 and 3. Overall, all alternatives may affect but are not likely to adversely affect the Canada lynx. The effects are expected to be discountable, insignificant, or completely beneficial.

RFSS Wildlife

Alternatives 1, 2, 3 and 4 would have no direct, indirect, or cumulative effects to Le Conte's sparrow, olive-sided flycatcher, yellow rail, peregrine falcon, sharp-tailed grouse, tiger beetle, Mancinus alpine butterfly, red-disked alpine butterfly, Nabokov's blue butterfly, jutta artic butterfly, Freija's grizzled skipper butterfly and Quebec emerald dragon fly.

For Alternatives 1, 2, 3 and 4, the proposed activities may impact individuals of heather vole, gray wolf, northern goshawk, boreal owl, black-throated blue warbler, bay-breasted warbler, Connecticut warbler, three-toed woodpecker, great gray owl, wood turtle, lake sturgeon, shortjaw cisco, northern brook lamprey, creek heelsplitter, and black sandshell but are not likely to cause a trend to federal listing or loss of viability.

RFSS Vascular plants, lichens, and bryophytes

Alternatives 1, 2, 3, and 4 would have no direct, indirect, or cumulative effects to long-leaved arnica, maidenhair spleenwort, Appalachian fir club moss, sticky locoweed, nodding saxifrage, encrusted saxifrage, false asphodel, smooth woodsia, *Arctoparmelia centrifuga*, and *Arctoparmelia subcentrifuga*.

The proposed activities in Alternatives 1, 2, 3, and 4 may impact individuals of alpine milkvetch, swamp beggar-ticks, floating marsh-marigold, Katahdin sedge, linear-leaved sundew, neat spike rush, moor rush, auricled twayblade, fall dropseed muhly, American shoregrass, dwarf water lily, club-spur orchid, northern bur-reed, awlwort, lance-leaved violet, *Cladonia wainoi*, large-leaved sandwort, Ross' sedge, pointed moonwort, common moonwort, Michigan moonwort, pale moonwort, ternate grapefern, least moonwort, Douglas hawthorn, small shinleaf, cloudberry, fairy slipper, ram's head ladyslipper, Western Jacob's ladder, *Caloplaca parvula*, *Certraria aurescens*, *Frullania selwyniana*, *Menegazzia terebrata*, *Ramalina thrausta*, *Sticta fuliginosa*, *Usnea longissima*, *Pseudocyphellaria crocata*, moschatel, triangle grapefern, goblin fern, New England sedge, Chilean sweet cicely, Braun's holly fern, Canada yew, barren strawberry, Canada ricegrass, rough-fruited fairy bells, and *Peltigera venosa*, but are not likely to cause a trend to federal listing or loss of viability.

3.11.2 Introduction

The biological assessment (BA) documents the potential effects on federally proposed, candidate, threatened or endangered species and designated critical habitat, which could result from designating which roads are open to off highway vehicles, as documented in the Travel Management Environmental Assessment (USDA Forest Service 2008). The BA is available upon request and is also found on the Superior National Forest website at <http://www.fs.fed.us/r9/superior>.

The Biological Evaluation (BE) evaluates the effects of the Forest-wide Travel Management project on threatened, endangered, proposed, and Regional Forester-listed (R9) sensitive species (U.S. Department of Agriculture (USDA) Forest Service Manual sections 2670.3, 2670.5 (3), 2672.4). The species evaluated in this report include all species on the newly revised R9 sensitive species list (January 16, 2007). The BE is available upon request and is also found on the Superior National Forest website at <http://www.fs.fed.us/r9/superior>.

3.11.3 Analysis Methods

The analysis will look at gray wolf, bald eagle, northern goshawk, large and mature upland patch guild, aquatic animal guild, aquatic/riparian plant guild, cliff plant guild, disturbed habitat plant guild, forested wetland plant guild, northern hardwood plant guild, and upland forest plant guild. It will not further analyze plant and animal species whose habitat (cedar swamps, expansive grasslands, sedge wetlands, wet meadows, shallow marshes, shallow pools, small ponds, open bogs, calcareous lakeshores, and near very large lakes) will not be affected by this project. Gray wolf and bald eagle are analyzed separately because they only recently came off of the Threatened and Endangered Species list and both are susceptible to disturbance from humans. Northern goshawk is analyzed separately because it is also susceptible to human disturbance and has some distinct nesting territories. Other species are grouped into the mature upland patch guild (Black-throated blue warbler, bay-breasted warbler, Connecticut warbler, three-toed woodpecker, boreal owl, great gray owl), aquatic species guild (wood turtle, lake sturgeon, short-jaw cisco, northern brook lamprey, creek heelsplitter, black sandshell), and six guilds of sensitive plant species.

Indicator 1: Road and snow-compacted trail density.

Road and snow-compacted trail density is used to measure G-WL-8, which states “Where existing road and regularly used snow-compacting trail densities coincide with lynx habitat and are greater than 2 miles per square mile, prioritize roads for seasonal restrictions or reclamation. Where possible or feasible, road and trail densities will be reduced in order to maintain or improve the natural competitive advantage of lynx in deep snow. If reduction of road density is not possible or feasible, densities should not be increased above current levels. Roads include all ownerships of classified and unclassified roads. Regularly-used trails are those that are used most years for most of the snow season.”

Indicator 2: Bald eagle indicators.

Indicators for bald eagles include roads open to motor vehicles within ¼ mile of known eagle nests, % of nests with vehicle use within ¼ mile, and miles of vehicle use in the nearbank riparian zone.

Indicator 3: Gray wolf indicators.

Indicators for gray wolf include roads open to all motor vehicles for gray wolf by wolf zone.

Indicator 4: Northern goshawk indicators.

Indicators for northern goshawk include miles of roads open to motor vehicles within post-fledging areas and large mature upland patches greater than 300 acres.

Indicator 5: Large and Mature Upland patch guild indicators.

Indicators for the large and mature upland patch guild (which include black throated blue warblers, bay-breasted warblers, Connecticut warblers, three-toed woodpeckers, boreal owls and great gray owls) include miles of roads open to all motor vehicles within large mature upland patches over 300 acres.

Indicator 6: Aquatic species guild indicators.

Indicators for the aquatic species guild (which include the wood turtle, lake sturgeon, short jaw cisco, northern brook lamprey, creek heelsplitter, and black sandshell) include roads open to all motor vehicles within the nearbank riparian zone and number of stream crossings.

Indicator 7: Sensitive plant species indicator

The indicator for the six sensitive plant species guilds is the number of known RFSS plant occurrences less than 200 feet from routes that are proposed to be open to OHV.

3.11.4 Analysis Area

The area covered by the analysis of direct and indirect effects includes all national forest system lands within the proclamation boundaries of the Superior National Forest and includes the Kabetogema and Pigeon River Purchase units and the BWCAW. This project does not propose activities inside the BWCAW, but effects to the wilderness will be considered as part of this analysis. The area covered by the cumulative effects analysis includes lands of all ownerships within the proclamation boundary because the Forest's large size contains enough habitat of the sensitive species to evaluate the effects of the project.

The time scale used for the analysis of direct and indirect effects is 10 years. This time scale is chosen because it is reasonable to assume that all proposed projects would be implemented by this time and expected effects have occurred. The time scale for cumulative effects is 15 years, looking back 10 years into the past, and 5 years forward. This is also an appropriate time scale for cumulative effects because it allows for the most realistic prediction of reasonably foreseeable future projects.

3.11.5 Affected Environment

There are currently 87 Regional Forester Sensitive Species and one Federally threatened species on the Superior National Forest. They occur in a variety of different habitat types throughout the Forest. The BE and BA include more detailed information on habitat use by the different species.

Environmental Consequences

3.11.6 Direct and Indirect Effects

Indicator 1: Road and snow-compacted trail density.

The BA contains the analysis for this indicator. In summary, current open road densities (Alternative 1) in 30 of 47 (64%) lynx analysis units (LAUs) are above the 2 mile / square mile threshold. Alternative 2 would reduce road densities in 39 of 47 (83%) LAUs. Two of the 30 LAUs currently above the 2.0 mile / square mile threshold would be reduced to less than 2.0 miles / square mile by this alternative.

Alternative 3 would reduce road densities in 14 of 47 (30%) LAUs and would increase road densities in 1 LAU (SNF11). This alternative would not drop any LAUs below the 2.0 mile / square mile threshold.

Alternative 4 would reduce road densities in 45 of 47 (96%) LAUs. Seven of the 30 LAUs currently above the 2.0 mile / square mile threshold would be reduced to less than 2.0 miles / square mile by this alternative.

Indicator 2: Bald eagle indicators.

The BE contains the analysis for this indicator. In summary, the primary effect that off highway vehicle use may have on bald eagle populations is the potential for disturbance of the breeding pair, especially during the critical nesting period. Alternatives 2 and 4 would reduce roads open to vehicles within bald eagle breeding areas. All action alternatives would reduce road miles in the nearbank riparian zone which could improve aquatic habitat conditions, thereby, possibly improving bald eagle prey species (fish) numbers. Alternatives 2 and 4 would reduce human disturbance due to off highway vehicles, and improve bald eagle nesting, foraging, and roosting habitat. Alternative 4 would have the least overall potential for disturbance..

Indicator 3: Gray wolf indicators.

The BE contains the analysis for this indicator. In summary, the more roads that are left open to off highway vehicle use within the Superior National Forest, the more potential exists for harassing or illegally killing individual wolves. Of the alternatives evaluated, Alternative 4 would minimize the risk of harassment and illegal killing of wolves within the Superior National Forest by having the largest reduction of road miles open to motor vehicles, followed by Alternative 2, Alternative 3 and Alternative 1.

Indicator 4: Northern goshawk indicators.

The BE contains the analysis for this indicator. In summary, all action alternatives show a decrease in miles of motorized road within goshawk post-fledging areas with Alternative 4 showing the greatest reduction followed by Alt. 2, Alt. 3 and Alt. 1. Also, all action alternatives show a decrease in miles of motorized road within goshawk foraging areas (using large mature patches greater than 300 acres as a surrogate) with Alternative 4 showing the greatest reduction followed by Alt. 2, Alt. 1 and Alt. 3.

Indicator 5: Large and Mature Upland patch guild indicators.

The BE contains the analysis for this indicator. In summary, two of three action alternatives would reduce amounts of road fragmentation and human disturbance to sensitive species in large and mature upland forest patches, with Alternative 4 reduces fragmentation and human disturbance to sensitive species in large and mature upland forest patches the most, followed by Alt. 2, Alt. 1 and Alt. 3.

Indicator 6: Aquatic species guild indicators.

The BE contains the analysis for this indicator. In summary, all action alternatives would reduce the potential for erosion and sedimentation within the nearbank riparian zone, with Alternative 4 reducing this potential the most, followed by Alt. 2, Alt. 3 and Alt. 1.

Indicator 7: Sensitive plant species indicator

The BE contains the analysis for this indicator. In summary, all alternatives have the potential to cause direct OHV disturbance (e.g. uprooting, trampling) to some sensitive plant populations or their habitat. All alternatives also have the potential for causing indirect negative impacts to sensitive plants and their habitat from the spread of invasive plants and from increased deposition of dust on plants. All

alternatives also have the potential to benefit some of the sensitive plant species that benefit from intermediate levels of disturbance. Alternative 4 would be the most desirable because it would have the least negative impacts on sensitive plants, followed by Alternative 2, Alternative 3, and Alternative 1.

3.11.7 Cumulative Effects

See Appendix B to the EA for a description of projects considered for cumulative effects along with resource-specific projects discussed below.

The BA and BE include specific cumulative effects analysis for each of the species or guilds analyzed. The following is a summary of the cumulative effects for all species.

Spatial framework: The analysis of cumulative effects considers the impact of past, present, and reasonably foreseeable future management activities on regional forest sensitive species on all land ownerships in the analysis area. Opportunities for consolidating off highway vehicle use on ownerships other than National Forest were included in this proposed action. Consultation with the State, Counties and tribes occurred (see Chapter 1 in EA) to try and mesh our travel planning as much as possible. Other agencies do have different regulations about seasonal use of motorized vehicles but overall, between public landowners, road miles open to motor vehicles declines.

Time frame: Cumulative effects analysis considers a 15 year period, which includes the accomplishments of the past 10 years, and reasonably foreseeable activities within the next 5 years. The next 5 years is a realistic timeframe for estimating what projects may be proposed in the vicinity.

Past impacts: The project area is highly fragmented because of timber harvesting, mixed ownership patterns, development, and road construction. The quantity and standard of roads has remained relatively stable in the last 5 years. Road density has stabilized, but the quality and standard of roads on the Superior has increased because of timber harvest and recreational activities. Increased road miles and road usage have lowered the amount of remote habitat available to species. Increased human access may result in disturbance during the breeding season, illegal shooting and trapping, introduced parasites and diseases, and competition with other species

Present impacts: Since 2004, many miles of road have been identified for decommissioning. Road decommissioning from previous resource management projects is making progress at reducing the road density, and consolidating road usage on the Superior National Forest.

Future impacts: Off highway vehicle use is expected to increase over the next 10 years, due to increasing public demand for this type of outdoor leisure activities. . The total Minnesota off highway vehicles registered has increased dramatically, from 56,706 in 1994 to 222,594 in 2004 (p. 33, Minnesota Department of Natural Resources 2005 OHV Study). As more land that is private is posted with no trespassing signs, more pressure is placed upon Federal, State, County, and other jurisdictions to designate trail routes for off highway vehicles. Although many species may benefit from the action alternatives on Federal Lands, the off highway vehicle project may shift the demand for access to State and County lands within the Superior National Forest. Forest Plan objective O-RMV-2 would allow up to 90 miles of designated off highway vehicle trails, some from this project and some from future projects that would be considered in future NEPA analysis.

Also, in the reasonably foreseeable future, there is continued vegetation management on all ownerships (see Appendix B to the EA). Federal projects will increase the miles of temporary roads to access harvest units but these roads will be closed and decommissioned when the harvest is completed, and this is also generally the case on other ownerships (see Appendix B to the EA). Some of the Forest Service projects will also decommission existing system roads. Thus, in the long-term, these projects will not increase miles of roads open to motorized vehicles. Finally, Forest Plan and Minnesota Forest Resource Council standards and guidelines and project-specific mitigation measures will reduce effects from these vegetation management projects (for examples, see Monitoring Reports FY 2005-2007; wildlife, RMV and transportation sections). Effects from Forest Service vegetation management projects will also be reduced through project design conducted through the NEPA process and consultation with the US Fish and Wildlife Service. Overall, the decrease in road density from this project will help offset effects from timber harvest and the associated roads.

There are also a number of proposed minerals management projects on the Forest (see Appendix B to the EA). These projects may affect vegetation, could lead to more disturbance and could require about 5 miles of temporary roads (see Appendix B to the EA). Effects to wildlife from road density should be minimal due to the small acreage involved in these projects compared to the Forest as a whole. Overall, the decrease in road density from this project will help offset effects from minerals projects and the associated roads.

Conclusion: Past, present and reasonably foreseeable actions described above would have the effect of reducing the number of miles of forest roads open for any travel, and therefore disturbance and fragmentation. This includes reducing effects to wildlife in the BWCAW since indirect effects to wildlife from roads outside the wilderness would be reduced. It is likely that OHV use will increase over the next 10 years, but this increased use will occur where OHV and highway vehicle traffic already occurs.

3.11.8 Conclusion – Direct, Indirect, and Cumulative Effects

When considered along with the effects of past, present, and reasonably foreseeable actions, all of the action alternatives have the possibility to improve habitat for TES species by reducing overall road density. Based on the analysis, Alternative 4 will reduce road density the most followed by Alternative 2, Alternative 3 and Alternative 1.