

13. TERRESTRIAL AND AQUATIC HABITAT

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Benefits Of Roadless Areas

1. Roadless areas provide critical wildlife habitat particularly for those species that need large, unfragmented tracts of land, and roads fragment that habitat. No roads should be built into any roadless areas.

Response: The conservation value of many of these areas as biological strongholds for some species was described in the DEIS (pp. 3-69 through 3-74, 3-78 through 3-83, 3-87 through 3-89, and 3-92 through 3-94). Fragmentation caused by roads and other human activities was discussed in the DEIS (pp. 3-56 through 3-59), and in the specialist report, *Landscape Analysis of Inventoried Roadless Areas and Biodiversity* (May, 2000) on pp. 38 through 41. Under the three prohibition action alternatives in the DEIS and FEIS, road construction and reconstruction activities, including temporary road construction, would be prohibited in inventoried roadless areas, with limited exceptions.

2. Roadless areas provide habitat for threatened and endangered species and protect biological diversity.

Response: The DEIS acknowledged the importance of inventoried roadless areas in providing habitat for threatened and endangered species and for overall protection of biological diversity. Further discussion

of this can be found in the *Roadless Area Conservation Project's Biological Evaluation for Threatened, Endangered, Proposed, and Sensitive Species* (the biological evaluation). This document is in the project record and available on the project's web site.

3. Roadless areas are essential for wildlife dependent on undisturbed old-growth habitat.

Response: The DEIS identified two alternatives that would restrict timber harvest to some extent in inventoried roadless areas (pp. 3-75 through 3-78). Alternative 3 would permit only those timber harvest activities that were needed to meet stewardship objectives, including those used to maintain or enhance late successional habitat where such need is demonstrated. Alternative 4, which would prohibit all timber harvest, was modified in the FEIS to provide an exception to the prohibition on timber harvest when needed for protection or recovery of threatened or endangered species, including those species that are old growth dependent. Decisions on the objectives for specific projects would continue to be made at the forest level.

4. Roadless area habitat is essential for species to complete their life cycles.

Response: The conservation value of many of these areas as biological strongholds for some species was described in the DEIS (pp. 3-69 through 3-74, 3-78 through 3-83, 3-87 through 3-89, and 3-92 through 3-94). Under the three prohibition action alternatives in the DEIS, road construction and reconstruction activities, including temporary road construction, would be prohibited in the inventoried roadless areas, with certain limited exceptions.

5. The Forest Service should preserve habitat for all birds including migrating neotropicals.

Response: The DEIS analysis described the adverse effects of smaller habitat patch size and loss of interior forest habitat on some neotropical migratory bird species, on p. 3-70. All of the action alternatives would have potential beneficial effects to both interior forest and neotropical migratory bird species, due to the reduced risk of human caused habitat fragmentation, degradation, and loss.

6. The Forest Service should prohibit road building and limit timber harvest to that required for good

stewardship in roadless areas in order to provide an abundance of wildlife to hunters and sightseers.

Response: The range of alternatives in the DEIS included Alternative 3 which would prohibit road construction and restrict timber harvest to those activities with stewardship objectives. The analysis of this alternative relative to wildlife species was described on pp. 3-69 through 3-78. The FEIS contains additional discussion of the effects of this and other alternatives on game species.

7. In order to protect important interior forest habitat, the Forest Service should reshape roadless and other unroaded areas into more rounded shapes by eliminating roaded corridors.

Response: Many inventoried roadless areas have irregular shapes and roaded corridors within their boundaries, due to a variety of factors. For example, in the DEIS (p. 3-12), it was estimated that roads had been constructed in about 2.8 million acres of inventoried roadless areas since the time of inventory, which has probably increased the irregular shape of many of these areas. The DEIS (pp. 3-71 through 3-72) described the adverse effects to interior forest species from the environmental edges created by roads. All of the prohibition alternatives would prevent further road construction and reconstruction within the entire area delineated within inventoried roadless areas, including the areas already roaded. However, this analysis did not address removal of roads from these or other unroaded areas. Decisions relative to reshaping these areas through road obliteration or by any other means would continue to be made locally, at the project or forest plan levels. The proposed Roads Policy would provide guidelines to be used in making decisions on road closure and obliteration. A discussion of the proposed Roads Policy and its relationship to this proposed rule was included in the DEIS on pp. 1-16 and 3-240.

Effects Of Roads On Terrestrial Species

8. Roads can have beneficial effects to wildlife.

Response: The DEIS included several examples of how roads may benefit some edge and early successional associated species (for example, p. 3-72). Further discussion of this subject has been added

to Chapter 3 of the FEIS, in the section on terrestrial habitats and species.

9. Wildlife populations are not negatively impacted by roads. The Forest Service is false in stating that roads disrupt wildlife and their habitat.

Response: The DEIS cited numerous scientific studies detailing the potential adverse effects of roads on wildlife and wildlife habitat (DEIS pp. 3-70 through 3-74). Although disturbance associated with road development may benefit a number of species dependent on early seral stage habitats, there are also numerous negative impacts related to habitat fragmentation, loss of connectivity, invasive species, and habitat security and effectiveness.

A specific example (DEIS p. 3-72) stated that although forest edges associated with road construction may benefit an array of early succession associated species (deer, bobwhite quail), they also provide access to interior forest habitat for opportunistic species such as the brown-headed cowbird. This species is a brood parasite that lays its eggs in the nest of other birds, and has been implicated in the decline of certain songbirds in the Sierra Nevada, including the willow flycatcher, least Bell's vireo, yellow warbler, chipping sparrow, and the song sparrow.

As summarized in the DEIS (pp. 3-72 through 3-73), Wisdom and others (2000) found that 70% of 91 vertebrate species in the Interior Columbia Basin are negatively affected by one or more factors associated with road construction and use. For some mammals, increases in road density are related to declines in habitat effectiveness and population viability (Noss and Cooperrider 1994). With an increase in roaded access, a corresponding increase in disturbance by humans is expected. The potential for harassment, disruption, and poaching of some species is expected to increase with additional access. Further detailed information on the potential effects of roads on wildlife and wildlife habitat is located on pp. 10-14 in the specialist report, *Analysis of Effects to Terrestrial and Aquatic Habitat and Species (May 2000)*.

10. Roads are necessary for wildlife management.

Response: The DEIS acknowledged that there can be beneficial effects related to wildlife habitat management from the access provided by roads. As

stated in the DEIS (pp. 3-75 and 3-76), prohibition Alternatives 2 and 3 would not limit the overall ability of the agency to manage wildlife habitat, including the ability to maintain or enhance early or late successional habitat, where such need is demonstrated, or to implement other wildlife habitat improvement through timber harvest activities in inventoried roadless areas. Specifically, timber harvesting could continue to be used in the development of early seral stage habitat for some big game and other species and to assist in threatened and endangered (T&E) species recovery.

Access for wildlife management through means other than construction or reconstruction of roads would continue to be available as permitted in forest and grassland plans. Wildlife populations in these roadless areas are currently being effectively managed using existing means of access. The analysis did not identify any adverse effects on wildlife populations from a prohibition on road construction in inventoried roadless areas.

11. *The Forest Service should consider the impacts of road access on opportunities for poaching of plants and animals, and on excessive hunting pressure.*

Response: The relationship between road access and poaching of animals and illegal collection of rare plants was discussed in the DEIS on pp. 3-72, 3-73, 3-78, 3-88, and 3-89. The effect of road access on hunting pressure for some game species was discussed in the specialist report, *Analysis of Effects to Terrestrial and Aquatic Habitat and Species (May 2000)*, on p. 19.

12. *The Forest Service should explain whether the Roadless Rule will block roads with gates for wildlife management purposes.*

Response: The DEIS discussed the adverse effects of human disturbance on some species on pp. 3-70 through 3-74, indicating that such disturbance can affect reproductive success, winter survival, and overall health for some species, particularly at times of the year when other stressors are present. Site-specific decisions have been made on many forests to limit the use of certain roads during times of the year when a species is sensitive to such disturbance. Decisions to close or gate existing roads for wildlife habitat protection will continue to be made at the local level, through forest and grassland plans and

project level NEPA analyses. It is not within the scope of this analysis to address use of existing roads. The prohibitions alternatives consider only road construction and reconstruction and timber harvest within inventoried roadless areas.

13. *The Forest Service should clarify that the road itself does not damage wildlife but the constructing of the road damages wildlife.*

Response: The DEIS cites numerous scientific references that detail potential adverse effects of both road construction and the existence and use of roads. While not associated with every road, some of the important potential adverse effects related to presence of a road, and which are independent of actual construction activities, include increased risk of introduction and establishment of non-native invasive plant and animal species, increased risk of adverse human and animal interactions, chronic sedimentation, increased levels of human disturbance, loss of snag habitat due to excessive fuelwood cutting, habitat fragmentation for some species, and risk of fuel or other chemical spills. Road-related effects were described in the DEIS in many places, including pp. 3-69 through 3-89.

14. *Fragmentation and road impacts are worse than portrayed in the DEIS, since the total road miles given on p. S-4 did not include Federal, State, and County roads.*

Response: The estimated road mileage on NFS lands cited in the DEIS referred to the transportation system administered by the Forest Service, which does not include roads that are owned and administered by County, State, or other Federal agencies. For purposes of our analysis relative to fragmentation and other road impacts, we did not feel that inclusion of those data would change the described effects. Road mileage data for other public and private roads on NFS lands have been added in the FEIS.

15. *The Forest Service should eliminate roads on national forests to gain wolf habitat or to protect habitat important for endangered and other wildlife species that need large unfragmented tracts of land.*

Response: This analysis does not address closure of existing roads. Decisions relative to existing roads would continue to be made locally, at the project or forest and grassland plan levels. The proposed Roads

Management Policy for the National Forest Transportation System (Roads Policy) would provide guidelines for making such decisions. A discussion of the proposed Roads Policy and its relationship to this proposed rule was included in the DEIS on pp. 1-16 and 3-240, and has been updated in the FEIS.

16. The Forest Service should connect fragmented habitat, using restoration and road obliteration methods.

Response: This analysis does not address habitat restoration and road obliteration. Decisions relative to restoring habitat connectivity through use of such methods would continue to be made locally, at the forest and grassland plan or project levels. The proposed Roads Policy would provide guidelines to be used in making decisions on road closure and obliteration. A discussion of the proposed policy and its relationship to this proposed rule was included in the DEIS on pp. 1-16 and 3-240. This has been updated in the FEIS.

17. Prior to taking any action that would degrade wildlife habitat capability through changing any roadless areas to roaded, a site-specific NEPA analysis is needed.

Response: Regardless of which alternative is selected, site-specific NEPA analysis for road construction and other types of proposed projects in inventoried roadless and unroaded areas would continue to be required, just as it is currently. The new 36 CFR Planning Regulations provide direction on evaluating inventoried roadless areas and unroaded areas during forest and grassland plan revisions.

18. The Forest Service should manage vehicles and maintain roads to protect wildlife diversity, habitat, and declining stocks of threatened fish.

Response: This analysis does not address maintenance or use of existing roads. Decisions relative to existing roads would continue to be made locally, at the project or forest plan levels. The proposed Roads Policy would provide guidelines to be used in making such decisions. A discussion of the proposed policy and its relationship to this proposed rule was included in the DEIS on pp. 1-16 and 3-240. This has been updated in the FEIS.

Effects Of Roads On Fish And Other Aquatic Species

19. The Forest Service should provide data about the effects of sedimentation from road construction on fish habitat.

Response: Sedimentation and landslides associated with roads, and the resulting effects on stream channel morphology were described in the DEIS on pp. 3-32 through 3-41. The DEIS cited numerous scientific studies detailing the adverse effects of increased sedimentation on fish and fish habitat, on pp. 3-81 through 3-83, as does the biological evaluation. The extent and significance of effects related to sedimentation caused by a specific road may vary by a number of factors, including road location, geology, road design, vegetation, and species present. However, it was possible to conclude, based on a review of scientific literature and on the results of past consultations with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service, that risks associated with increased sediment yields from road construction are not discountable and may, in fact, constitute significant threats to the continued viability of some aquatic species, particularly when such effects occur in conjunction with other kinds of habitat loss, degradation, fragmentation, or disturbance.

20. The Forest Service should address the impacts of roads on fisheries.

Response: The DEIS drew upon the substantial scientific evidence that is available addressing the effects of roads on aquatic species. Utilizing this information, the DEIS described potential road impacts to fish and other aquatic species on pp. 3-78 through 3-87. Further discussion of these impacts is included in the biological evaluation.

21. The Forest Service should not allow road construction and resource extraction in roadless areas because of the negative impact on declining stocks of salmon that spawn in the down stream river systems.

Response: The value of many of these inventoried roadless areas in providing or influencing downstream habitat for Pacific salmon was addressed in the DEIS on pp. 3-79 through 3-80. Further discussion on potential effects from road construction and timber harvest to listed anadromous

fish species is included in the biological evaluation. Analyses specific to the effects of other kinds of resource extraction were not included in the DEIS or FEIS, because the only prohibitions considered in detail were road construction/reconstruction and timber harvest. In the development of alternatives, the prohibition of other resource extraction activities in inventoried roadless areas was considered (DEIS p. 2-18), but eliminated from detailed study because adequate data on such uses are currently not available nationally, and these activities do not appear to present the same level of risk for alteration and fragmentation of natural landscapes on a national scale (DEIS p. 1-10). Decisions regarding other kinds of resource extraction activities in inventoried roadless areas, therefore, would continue to be made through local planning processes.

22. *The Forest Service should address the recovery time needed for road construction damage in areas where small amounts of precipitation fall and growing seasons are short.*

Response: The ecological factors section of the DEIS alluded to the variability in magnitude and duration of effects from road construction, based on a variety of factors, including types and intensity of past disturbances, and the overall landscape context, but did not specifically address the effects of rainfall amount and length of growing season on recovery time. The FEIS describes this relationship more explicitly, in the aquatic species section, under Alternative 1.

Effects of Timber Harvest

23. *Timber harvest can benefit wildlife and should be encouraged.*

Response: The DEIS acknowledged potential beneficial effects to wildlife from timber harvest. It identified three alternatives that would not prohibit timber harvest, including the No Action Alternative. Under these three alternatives, timber harvesting would continue to be available as a management tool to enhance wildlife habitat. As stated in the DEIS (pp. 3-75, 3-76), they would allow maintaining or enhancing early or late successional habitat where such need is demonstrated, or implementing other stewardship-timber harvest activities, and would not limit the agency's ability to manage wildlife habitat. Specifically, timber harvesting could be used to create early successional habitat for some big game

and other species and to assist in T&E species recovery (for example, maintaining and improving habitat for the red-cockaded woodpecker).

The FEIS contains additional discussion of the potential benefits of timber harvest to some species, including game species such as white-tailed deer and wild turkey. Alternative 4 has been modified in the FEIS to include an exception for timber harvest if needed for recovery or protection of threatened, endangered and proposed (TEP) species.

24. *The DEIS fails to show any positive effects of roaded areas with clearcuts.*

Response: The DEIS acknowledged that habitats modified or created by timber harvest may benefit a number of species that use early seral and late seral habitats. This information was displayed within the DEIS on pp. 3-72, 3-76, 3-77, and 3-96. Pages 17 through 21 of the specialist report, *Analysis of Effects to Terrestrial and Aquatic Habitat and Species (May 2000)*, provide a more detailed discussion of the effects of timber harvest in relation to game species. The "Terrestrial Animal Habitat and Species" section of Chapter 3 in the FEIS has been modified to address this subject in greater detail.

25. *The Forest Service should ensure that wildlife is not displaced by logging operations.*

Response: The DEIS (pp. 3-69 through 3-78) and specialist report, *Analysis of Effects to Terrestrial and Aquatic Habitat and Species (May 2000)* (pp. 10-22) addressed the effects of timber harvest on wildlife species. This discussion has been carried forward into the FEIS and biological evaluation. Two of the prohibition alternatives in the DEIS would establish some level of restrictions on timber harvest – Alternative 3 would prohibit all non-stewardship harvest activities, and Alternative 4 would prohibit all timber cutting activities, except those needed for recovery or protection of TEP species. Under all of the alternatives, however, site-specific effects to wildlife species from proposed management activities, including timber harvest, would continue to be addressed locally on a project by project basis as part of the NEPA process. This would be accomplished by adherence to standards and guidelines within forest and grassland plans, recovery and conservation plans for TEP species, and through consultation requirements under the Endangered Species Act.

26. The Forest Service should only remove timber to enhance the environment of ground birds.

Response: The DEIS acknowledged that there can be beneficial effects for wildlife management from timber harvest. It identified three alternatives that do not prohibit timber harvest, including the no action alternative. Within the three identified alternatives, timber harvesting would continue to be available as a management tool to enhance wildlife habitat. As stated within the DEIS (pp. 3-75 through 3-77), the above listed alternatives would not limit the overall ability of the agency to manage wildlife habitat, including the ability to maintain or enhance early or late successional habitat, where such need is demonstrated, or to implement other stewardship-timber harvest activities. Specifically, timber harvesting could continue to be used to improve habitat for some kinds of species, including ground-nesting birds. Alternative 4, which would prohibit all timber harvest, was modified in the FEIS to provide an exception to the prohibition on timber harvest when needed for protection or recovery of threatened or endangered species.

27. A prohibition on logging in roadless areas will help maintain an adequate supply of large woody debris, a vitally important component of both terrestrial and aquatic habitats.

Response: The relationship between timber harvest and loss of large woody debris in terrestrial and aquatic ecosystems was addressed in the DEIS on pp. 3-73, 3-82, and 3-83, and is further discussed in the biological evaluation.

28. The Forest Service should maintain buffer zones around timber sales to protect wildlife diversity.

Response: The conservation of inventoried roadless areas provided by the action alternatives would, in essence, provide substantial buffer zones to surrounding roaded and more heavily disturbed areas. However, the need to establish prescriptive buffer zones around timber sales within these areas would continue to be analyzed as part of project specific NEPA analysis, in accordance with the standards and guidelines of the applicable forest plan.

29. The lack of logging will cause wildlife management to be harder and less effective by reducing carrying capacity, increasing fire mortality, and leading to over population and death of wildlife. The proposed plan will cause a loss of funding for wildlife management, due to fewer hunters.

Response: The range of prohibition alternatives described in the DEIS included three that would maintain the current ability of the agency to manage wildlife habitat through timber harvest. Access for timber harvest through means other than construction or reconstruction of roads would continue to be available as permitted in forest plans. Wildlife populations and habitats in these roadless areas are currently being effectively managed using existing means of access and a variety of management tools in addition to timber harvest. Effects on fuels management and fire suppression are not anticipated to be substantial under any of the alternatives, and are addressed in the DEIS pp. 3-98 through 3-106. Existing access for hunters would not be affected by the range of alternatives for this proposal. No loss in funding for wildlife management due to fewer hunters is expected.

30. The Forest Service should not artificially maintain early successional stages in mature stable forest systems.

Response: Decisions on whether it is appropriate to maintain certain successional stages through active management would continue to be made at the forest plan and project levels, consistent with forest plan standards and guidelines, regardless of the alternative selected for this proposal. With the exception of Alternative 4, use of timber harvest as a tool to manage late or early successional habitat would not be prohibited in inventoried roadless areas by this proposal. Alternative 4 has been modified in the FEIS to include an exception for timber harvest if needed for recovery or protection of TEP species. The DEIS (pp. 3-73 through 3-74), and the FEIS in somewhat more detail, discuss scientific research indicating that, in parts of the country, populations of some species dependent on early successional habitat are experiencing significant declines.

31. The government needs to seize old-growth forests from timber companies to protect them.

Response: This proposal only addresses National Forest System (NFS) lands. The Forest Service, through the State and Private Forestry program, can provide technical assistance to private landowners when requested, including advice relative to conservation of old-growth resources. Private lands can only be added to the NFS when there is a willing seller and when the acquisition of such lands helps meet land management objectives.

Human Disturbance And Encroachment

32. Human activities cut off wildlife migratory routes and cause wildlife mortality if the animals get too close to humans.

Response: The DEIS acknowledged the importance of inventoried roadless areas in providing habitat for species that require large, relatively undisturbed blocks of land, and described the conservation value of many of these areas as biological strongholds. The impacts of roads and timber harvest activities, including effects relative to connectivity and fragmentation of wildlife habitat, were discussed on pp. 3-69 through 3-74. Fragmentation was also discussed in the DEIS on pp. 3-56 through 3-59, and in the specialist report, *Landscape Analysis of Inventoried Roadless Areas and Biodiversity*, (May 2000), pp. 38 through 41. The role that road access may play in providing opportunity for chronic, negative interactions between humans and some species, such as wolves and grizzly bears, was addressed on p. 3-73 in the DEIS. All of the action alternatives would have the potential to lower the risks of additional habitat fragmentation and loss of connectivity, for inventoried roadless areas, relative to the no action alternatives.

33. Humans should be managed to mitigate disturbance of native species.

Response: The DEIS (pp. 3-70 through 3-73) described some of the potential adverse effects to wildlife from human disturbance, including disruption of migration, reproduction, and rearing of young, as well as increases in the overall level of physiological stress, all of which can affect population viability. All of the prohibition action alternatives would convey some beneficial effects by limiting the development of additional roaded access into inventoried roadless areas, thereby limiting additional road-associated human disturbance of

wildlife. Alternatives 3 and 4 would directly reduce disturbance associated with timber harvest. Alternative 2 would indirectly reduce much of that disturbance. Decisions limiting other kinds of human activities would be made through forest and grassland plan and project NEPA analyses.

34. The Forest Service should consider the impacts of human encroachment on wildlife and wildlife habitat, including important wildlife winter range.

Response: The DEIS addressed the issues of habitat fragmentation and loss of habitat connectivity caused by human development in a general way. It described habitat loss and degradation as the leading cause of species endangerment (p. 3-93). Development in mid and low elevation winter range has had adverse effects on numerous species and has increased the incidence of negative human-animal interactions. This further highlights the value of conserving these remaining relatively undisturbed areas, many of which provide important winter range or supply other essential habitat attributes. All of the action alternatives would have beneficial effects relative to the conservation of biological diversity.

Species Management And Protection

35. This proposed policy does not protect the multiple small tracts of roadless areas that comprise critical connectivity for sensitive species. It should be modified to include areas of 1000 acres or less to protect species from extinction.

Response: The action alternatives would apply to all inventoried roadless areas, regardless of size. As shown in the DEIS (Fig. 3-18, p. 3-61), there are numerous inventoried roadless areas that are less than 1000 acres to which the selected alternative would apply. Further consideration of other small blocks of unroaded areas could take place during forest or grassland plan revisions under the new 36 CFR 219 Planning Regulations that provide direction on evaluating inventoried roadless areas and unroaded areas during plan revisions.

36. Wildlife management should take into account the needs of non-game species.

Response: The DEIS acknowledges the importance of inventoried roadless areas in providing important habitat for an array of species including wildlife species that are currently listed as endangered and

threatened under the Endangered Species Act or designated by the Forest Service as sensitive species. Additionally, the impacts of roads and their effects on many non-game wildlife species and habitats were discussed throughout the specialist report, *Analysis of Effects to Terrestrial and Aquatic Habitat and Species (May 2000)*, and in the DEIS on pp. 3-70 through 3-92. The DEIS presented a discussion of the potential beneficial effects of the action alternatives relative to the conservation of biological diversity and overall ecosystem health.

37. *The preferred alternative should do more to protect species and their habitats.*

Response: The degree of protection provided to species and to specific habitat types would vary by action alternative. The biological evaluation concluded that none of the action alternatives would be likely to adversely affect listed species, or result in a trend to Federal listing or a loss of viability for sensitive species. All of these alternatives were found to have predominantly beneficial effects, relative to the conservation of species and their habitats.

38. *Multiple use management should include wildlife and habitat for wildlife.*

Response: The purpose and need described in the DEIS for this project (p. 1-1) address the value of inventoried roadless areas in providing habitat for native terrestrial and aquatic species, and in maintaining biological diversity. The prohibition action alternatives would provide important beneficial effects relative to conservation of wildlife species and their habitats.

39. *The Forest Service should acknowledge that science supports the restoration of habitat as the key to the salmon fisheries recovery.*

Response: While the range of alternatives for this proposal addresses the need to prohibit certain activities that could cause the loss of important roadless characteristics and values, the Forest Service also recognizes and supports the value of habitat restoration for recovery of listed salmon. The range of alternatives would provide important conservation benefits for salmon recovery by limiting certain kinds of future disturbance within over 12 million acres of habitat designated as critical for recovery of threatened and endangered Pacific

salmon (DEIS p. 3-80). The biological evaluation for this project found that there would be important beneficial effects to these species. Decisions relative to the need for specific restoration projects to promote species recovery would continue to be made at the project and forest plan levels.

40. *The Forest Service should not spend conservation dollars in ways that do not help conservation and support legislation efforts regarding conservation.*

Response: It is not within the scope of this proposal to determine the best use of funds, nor did the analysis indicate a need for new legislation regarding conservation of roadless areas. A determination of which conservation activities are appropriate within inventoried roadless areas and other NFS lands would be made locally, consistent with other regulations and forest or grassland plan standards and guidelines.

41. *The Forest Service should avoid focusing on single species management.*

Response: This proposal does not focus on single species management, but rather addresses the need to conserve the characteristics and values of roadless areas important for many reasons, including conservation of biological diversity. The purpose and need discussed in Chapter 1 of the DEIS described the values inherent in these areas for conservation of plant and animal communities.

Non-Native Invasive Species

42. *Access is necessary for active management to control invasive weeds and other non-native invasive species.*

Response: No prohibitions specific to weed control or control of other non-native invasive species were proposed within any of the alternatives listed in the DEIS. The prohibition of road construction and road reconstruction would not limit the current ability of the agency to manage for the eradication and control of invasive non-native species in inventoried roadless areas. Alternative means of accessing areas targeted for treatment are available. Current means of access into inventoried roadless areas, including existing classified roads, would continue to be available, unless local decisions are made in the future that modify that access.

The DEIS included citations of scientific studies detailing the adverse effects of roads in serving as points of entry for non-native plants and other non-native invasive species. These citations were located on pp. 3-88 through 3-89 within the DEIS as well as the specialist report, *Analysis of the Effects to Terrestrial and Aquatic Habitat and Species (May 2000)*, on pp. 37 through 39. This discussion has been expanded in the FEIS.

43. Roadless areas help prevent the intrusion of invasive plant and other non-native species.

Response: The DEIS (pp. 3-88 through 3-97) described the role that roads frequently play in providing avenues for introduction of non-native invasive plants and other species. Such introductions can undermine native plant diversity, reduce overall site productivity of plant species used by wildlife, alter fire regimes, and have other adverse ecological effects. Once introduced into an area, many of these invasive species are often difficult or impossible to eradicate, even when aggressive active management measures are undertaken. This discussion has been expanded in Chapter 3 of the FEIS, under the Terrestrial and Aquatic Plants section.

44. Roadless areas are not barriers against noxious weeds; noxious weeds occur naturally.

Response: Although the DEIS (pp. 3-88 through 3-97) discussed the role that roads frequently play in providing a means of entry for non-native invasive species into an area, it was not our intent to imply that they serve as the sole means of such introductions. For example, some non-native invasive plant species can be spread by animals, or transported by wind or water. While there are no means to control most of these other avenues of introduction, prohibiting new road construction would limit future opportunities for the introduction and establishment of many invasive species into these areas.

45. The Forest Service should make combating non-native species a priority, and should provide funding for noxious weed control.

Response: One of the important benefits of prohibiting additional road construction in inventoried roadless areas, as described in the DEIS pp. 3-88 through 3-97, would be maintaining the

current resistance of an area to the introduction and establishment of non-native invasive species. Management actions needed to control the spread of non-native species would continue to be addressed locally in forest and grassland plan and project-level decisions, using site and species-specific information to identify appropriate measures. The Forest Service recognizes the importance of prevention and control efforts and fully supports actions needed to implement Executive Order 13112 on Invasive Species. Necessary funding needed for such actions would continue to be identified as part of the normal budget development process.

Habitat Analysis

46. An analysis of the impact of each alternative on habitat should be included in the EIS, including an analysis of the impacts on big game winter range.

Response: The DEIS analyzed the effects of each alternative on terrestrial and aquatic habitat, particularly on pp. 3-69 through 3-97. A discussion of potential effects to some big game species was included in the specialist report, *Analysis of Effects to Terrestrial and Aquatic Habitat and Species, (May 2000)*, on pp. 17 through 21. Additional discussion relative to the potential effects of the alternatives on big game and other game species has been included in the FEIS, in Chapter 3, under the section on terrestrial habitat and species.

47. Roadless areas do not constitute the type of habitat the Canada lynx needs. The Forest Service should allow managed roads and logging in order to provide snowshoe hare habitat necessary to ensure lynx survival.

Response: The inventoried roadless areas analyzed in the DEIS reflect many different ecosystem types and seral stages. Specifically, within the range of the Canada lynx, these inventoried roadless areas contain a number of habitat attributes that are important to the continued persistence of this species, including habitat for prey species. The DEIS cited several scientific studies detailing the direct and indirect effects of roads on the Canada lynx. These citations were on pp. 3-70 and 3-72 of the DEIS as well as the specialist report, *Analysis of the Effects to Terrestrial and Aquatic Habitat and Species (May 2000)*, on pp. 11 and 13. In compliance with the Endangered Species Act, the agency will adhere to the consultation requirements for future activities within

these areas, as well as incorporate as appropriate the conservation measures outlined within the Canada Lynx Conservation Agreement and the Conservation Strategy and Assessment.

48. *The Forest Service should consider plant and animals go through cycles of creation and extinction naturally, not because roadless areas are preserved.*

Response: While it is correct to state that evolution and extinction are natural processes, there is substantial scientific evidence that indicates that the rate of extinction has been significantly increased as a result of human-caused habitat degradation and loss. The DEIS described this on pp. 3-92 through 3-93, stating that the current rate of extinction is about 400 times that of recent geologic time, and is increasing. With over 1000 species currently listed as threatened or endangered in the United States, along with almost 3000 additional species identified as sensitive by the Forest Service due to concerns about their continued viability, conservation of inventoried roadless areas is important, as described in the DEIS in Chapter 1 under the purpose and need. The analysis in Chapter 3 documented the substantial number of threatened, endangered, and sensitive species that use habitat within inventoried roadless areas, and demonstrated the value of these areas as biological strongholds, and refuges.

49. *The Forest Service should not include elk as an example of species heavily dependent on large tracts of roadless areas.*

Response: The DEIS cited several studies detailing the adverse effects of roads and open road density on habitat use by elk (for example, pp. 3-70 and 3-72). It described elk as one species that does well in undeveloped areas, and for which large blocks of unroaded areas could provide important security habitat. Elk are not heavily dependent on large tracts of roadless areas, but they do exhibit road avoidance behavior. Further discussion of the effects of the alternatives on elk and other big game species has been included in Chapter 3 of the FEIS.

50. *The Forest Service should address the effects of road induced habitat fragmentation on grizzly bears, wolves, elk, and other species.*

Response: The DEIS addressed the effects of road-induced habitat fragmentation on terrestrial species

on pp. 3-69 through 3-78. Although it was not our intent to do a comprehensive, species-specific analysis, current scientific references summarizing the effects of roads on grizzly bear, wolf, elk, and numerous other species were cited to illustrate key findings (for example, p. 3-70). Further discussion of fragmentation was included in the DEIS on pp. 3-56 through 3-59.

51. *The Forest Service should avoid using grizzly bear recovery potential as a measure of effects of the proposed rule on fragmentation.*

Response: The discussions in the DEIS of the potential effects of the range of alternatives for this proposal relative to fragmentation of grizzly bear and snail habitats were only two of the many examples given in the DEIS on the effects of roads relative to habitat fragmentation. Since habitat fragmentation for a wide-ranging species is much different from that for a narrowly distributed and less mobile species, the question of whether an area is fragmented depends on which species' habitat is being analyzed. For example, what represents habitat fragmentation for a snail species is quite different from that affecting the grizzly bear. Habitat fragmentation was discussed for other species in the DEIS, including fisher, marten, lynx, some neotropical migratory bird species, gray fox, spotted owl, pileated woodpecker, and trillium, a common understory plant species. The statement in the DEIS concerning grizzly bear recovery potential has been removed from the FEIS to avoid confusion, as it was meant to be a qualitative statement about the value of roadless areas as grizzly bear habitat, and not a quantitative measure of recovery potential.

52. *The Forest Service should clarify discrepancies regarding the number of recovery projects for threatened and endangered species.*

Response: As part of the analysis for the DEIS, the national forests and grasslands were asked to provide a list of the projects planned within the next five years for recovery of threatened or endangered species that would require road construction within inventoried roadless areas. Only one such project was identified. The objective in acquiring this information was to determine whether there would be potential adverse effects to listed species from a prohibition on road construction within these areas. The conclusion was not related to the total amount of recovery projects occurring within inventoried

roadless areas, but rather to how much of that activity would actually require road construction or reconstruction. These data showed that few if any such projects would require road construction. This discussion has been clarified in the FEIS.

53. *The Forest Service should define threatened, endangered, proposed, and sensitive species and should identify the Counties where these species are found.*

Response: Definitions for these terms have been added to the FEIS Glossary. Information on which national forests provide habitat for these species is included as part of the biological evaluation in the list of threatened, endangered, and proposed species. The list can be accessed on the project website, and in the regional sensitive species lists in the project record. For purposes of this analysis, display of County-level occurrence data were not deemed essential.

54. *The Forest Service should address the Biological Evaluation in the Draft EIS.*

Response: A biological evaluation is completed as part of the environmental analysis process, with the findings documented in the decision notice or record of decision. There is no requirement that a biological evaluation be published as part of a DEIS or FEIS. The analysis of the alternatives in the DEIS for threatened, endangered, proposed, and species disclosed the potential effects of each alternative (pp. 3-92 through 3-97). The biological evaluation for this project will be available in the project record, and on the project website. The FEIS includes the findings of the biological evaluation in Chapter 3, under the Threatened, Endangered, Proposed and Sensitive Species section.

55. *The Draft EIS should include an analysis of wildlife implications for early successional species.*

Response: A discussion of the potential effects of the range of alternatives for this proposal on early successional species was included in the DEIS, on pp. 3-73 through 3-76. Additional discussion relative to early successional species has been included in the FEIS.

56. *The Forest Service should demonstrate the connection between poaching and road access.*

Response: The DEIS (p. 3-73, 3-78) cited multiple recent scientific references supporting the relationship between road access and poaching. Additional studies are cited in the FEIS that also support this connection. The analysis did not attempt to gauge the potential magnitude or significance of adverse effects related to this particular issue. Rather, it listed poaching and illegal take or collection as one of many potential indirect effects of roads that cumulatively may have adverse effects on game and non-game terrestrial and aquatic animals and plants and their habitats.

57. *The Forest Service should provide information on the magnitude of illegal introduction and harvest of fish species.*

Response: The DEIS (p. 3-78) cited recent scientific references supporting the relationship between road access and illegal introduction and harvest of fish. The analysis did not attempt to gauge the potential magnitude or significance of adverse effects related to this particular issue. Rather, it was included as one of many potential indirect effects of roads that cumulatively may have adverse effects on game and non-game aquatic species and their habitats.

58. *The Forest Service should recognize the importance of forests as the principal habitat for pollinators.*

Response: NFS lands do provide habitat for numerous species important in the pollination of agricultural crops. The DEIS did not include a discussion of this functional group as there was no clear relationship between the range of alternatives and this group as a whole, which includes a wide variety of species ranging from insects and birds to mammals. There would be potential benefits to many pollinator species from the range of alternatives for this proposal, given the potential for conservation of important habitat attributes, and maintenance of resistance to establishment of invasive species. Some of these species are addressed in the biological evaluation since they are Forest Service designated sensitive species or are listed as threatened or endangered under the Endangered Species Act.

OHV Impacts

59. *There is no valid evidence that wildlife is negatively affected by motorized recreation. Some*

species may benefit from using trails created by snowmobiles in winter.

Response: An analysis specific to the potential adverse or beneficial effects of OHV use or other motorized recreation activities on wildlife was not included in the DEIS or FEIS, because none of the alternatives analyzed would directly preclude such activities. In the development of alternatives, the prohibition of activities in inventoried roadless areas such as use of snowmobiles and OHVs was considered (DEIS p. 2-18), but was eliminated from detailed study because adequate data on such uses are not available nationally. Decisions regarding such uses, therefore, are better made through local planning processes. These types of motorized recreation activities would continue in inventoried roadless areas if allowed by the forest and grassland plans.

The DEIS (pp. 3-70 through 3-73) did discuss the general adverse effects of human disturbance on wildlife. With an expected increase in roaded access into these areas under the no action alternative, a corresponding increase in human disturbance would be expected. The potential for harassment, disruption, and increased access for poaching of some species would be expected to increase with additional access. Further detailed information on the effects of roads on wildlife and wildlife habitat is located on pp. 10 through 14 of the specialist report, *Analysis of Effects to Terrestrial and Aquatic Habitat and Species (May 2000)*.

60. The Forest Service should address the spread of invasive weeds caused by OHVs.

Response: An analysis specific to the effects of OHV use on the spread of non-native invasive plants was not included in the DEIS or FEIS, because none of the alternatives analyzed included a prohibition on OHV use in inventoried roadless areas. In the development of alternatives, the prohibition of motorized activities in inventoried roadless areas such as use of snowmobiles and OHVs was considered (DEIS p. 2-18), but eliminated from detailed study because adequate data on such uses are not available nationally. Decisions regarding OHV use in these areas would continue to be made through local planning processes.

61. The Forest Service should address the fragmentation of habitat by motorized use.

Response: An analysis specific to the potential effects of OHV use or other motorized use on habitat fragmentation was not included in the DEIS or FEIS, because none of the alternatives analyzed would affect such uses. In the development of alternatives, the prohibition of motorized activities in inventoried roadless areas such as use of snowmobiles and OHVs was considered (DEIS p. 2-18), but was eliminated from detailed study because adequate data on such uses are not available nationally. Decisions regarding such uses would continue to be made through local planning processes. These types of motorized recreation activities would continue in inventoried roadless areas if allowed by the applicable forest and grassland plans.

The DEIS (pp. 3-70 through 3-73) did discuss the general adverse effects of human disturbance on wildlife. With an expected increase in roaded access into these areas under the no action alternative, a corresponding increase in human disturbance, including motorized use dependent on such access, would be expected. The potential for harassment, disruption, and increased access for poaching of some species would be expected to increase with additional access.

Requests For Special Designations

62. All remaining lands that contain endemic biota and fauna or are critical habitat for native fish and wildlife should be conserved as living laboratories or designated as Wildlife Refuge Areas.

Response: The special designation of NFS lands, for any purpose, is beyond the scope of this DEIS. Land allocations to protect endemic species or critical habitat are done through the forest and grassland planning process. However, the conservation value of many of these areas as biological strongholds was described in the DEIS (Chapter 3) and in the specialist report, *Analysis of Effects to Terrestrial and Aquatic Habitat and Species (May 2000)*. All of the prohibition action alternatives would have important beneficial effects for wildlife.

63. In addition to roadless and Wilderness areas, the Forest Service should set aside estuaries and wetlands.

Response: The special designation of lands containing estuaries or wetlands or any other specific

habitat, is beyond the scope of the proposed action for the DEIS. While such kinds of land allocations can be done through the forest and grassland planning process, it was not within the scope of this proposal to make such allocations. The purpose and need for action was described in the DEIS (p. 1-10) as two-fold: 1) to immediately stop activities that have the greatest likelihood of degrading desirable characteristics of inventoried roadless areas, and 2) to ensure that ecological and social characteristics of inventoried roadless areas and unroaded areas are identified and evaluated through local forest and grassland planning efforts. The conservation value of unroaded areas, many of which contain wetlands or estuaries, was described in the DEIS and in the specialist report, *Analysis of Effects to Terrestrial and Aquatic Habitat and Species* (May 2000).

Effects To State And Local Government Agencies

64. *The proposed rule will limit the ability of State game and fish agencies to perform their responsibilities by increasing the difficulty of accessing many areas. Costs to conduct activities such as fish stocking and population inventories will increase.*

Response: None of the alternatives presented in the DEIS would change the current capabilities of State game and fish agencies to perform their responsibilities, or increase the cost of doing so. The range of alternatives for this proposal would not close any existing roads or reduce existing access into inventoried roadless areas. Any decisions relative to management of existing roads within inventoried roadless areas would continue to be made locally, at the forest and grassland plan or project levels. The Roads Policy would provide guidelines to be used in making such decisions. Discussion of the proposed Roads Policy and its relationship to this proposed rule was in the DEIS on pp. 1-16 and 3-240.

65. *The proposed regulation does not provide any means to insure that the jurisdictional authority of the States with respect to wildlife management is given full consideration.*

Response: The proposed rule would not change existing jurisdictional authority of the States with respect to wildlife management, or negate any existing memoranda of understanding, or any other

formal and informal processes currently in place. Nor would it prevent the future development or amendment of such agreements. The Forest Service recognizes the relative responsibilities of the States to manage wildlife populations.

66. *The Forest Service should address the effects of the proposed rule on local control of non-native invasive plants in roadless areas.*

Response: None of the alternatives presented in the DEIS would change the current capabilities of State or local government agencies to implement control programs for non-native invasive plants in inventoried roadless areas, or increase the cost of doing so. The range of alternatives for this proposal would not close any existing roads or reduce existing access into these areas. The DEIS describes the role that roads can perform in the introduction and establishment of many of these species. By implementing a prohibition on additional road construction in these areas, the potential for future introductions may be diminished, helping Federal, State, and local government agencies avoid the increased costs associated with a need to treat new introductions of these species.

Offsite Impacts

67. *The DEIS did not analyze the human safety issue related to the potential increase in vehicle/animal collisions along established highways that would result from increases in wildlife populations as a result of this proposal, nor did it address other off-site impacts of expanding wildlife populations.*

Response: The DEIS did not project an increase in wildlife populations as a result of any of the alternatives. Potential beneficial effects of the range of alternatives relative to wildlife populations would stem from prohibiting certain future activities that could degrade wildlife habitat. In essence, this proposal could lower the risk of species population declines from road-related impacts related to additional road construction in inventoried roadless areas. It would not, in itself, promote any increases in population size, as it would not address closure or use of existing roads, nor would it provide for habitat restoration or enhancement. Any such actions that could increase the habitat effectiveness of an area and potentially increase the population size of certain wildlife species would continue to be analyzed at the

forest or grassland plan or project level, using area-specific data.

Other Activities

68. *The Forest Service should clarify if municipalities and private companies would be required to stop traveling into public lands for gathering massive, irreplaceable quantities of wild seed.*

Response: It is not within the scope of this analysis to assess whether collection of wild seed is an appropriate use of public lands. Activities of this type are authorized under special use permits, following the standards and guidelines established in forest and grassland plans, with decisions usually made on a case-by-case basis. Collection of wild seed, or of any other forest or grassland resource from inventoried roadless areas, would have to be implemented using existing means of access, as road construction and reconstruction would be prohibited under all of the prohibition action alternatives.

69. *The Forest Service should post wildlife signs to make the public aware of when they are in ecologically sensitive areas (for example, nesting birds, baby animals).*

Response: Although it was not within the scope of this analysis to identify and address public information and awareness opportunities, the Forest Service supports an active and highly effective conservation education program as part of its overall program for management of these public resources. Identification of specific conservation education needs, such as placement of signs to raise public awareness of ecologically sensitive areas, occurs at the regional and forest levels.

70. *The Forest Service should ban mining operations in roadless areas to protect sensitive, threatened, and endangered species.*

Response: During the development of alternatives for the DEIS, prohibitions on a variety of other activities within inventoried roadless, including mining, were considered. The agency determined that only those uses and activities that are likely to significantly alter landscapes and cause landscape fragmentation on a national scale should be considered for prohibition in this proposal. Mining was not identified as posing the same level of

national risk for adversely affecting roadless areas, compared to road construction and timber harvest, and it is already governed by existing law (DEIS pp. 1-10 through 1-11). A social and economic mitigation measure is being considered which would provide an exception to the prohibition of road construction and reconstruction when needed for permitted mineral leasing activities, if no feasible alternative exists. The impacts of all mining activities, including those that would fall under this exception, would continue to be addressed at the forest and grassland level. Proposals with the potential to affect a threatened or endangered species would be subject to the consultation requirements of the Endangered Species Act.

71. *The Forest Service should reintroduce grizzly bears and wolves into the lower Rockies and move cattle back to private ranches.*

Response: Reintroduction of species listed under the Endangered Species Act, such as the grizzly bear or the wolf, is beyond the scope of this proposal. Such reintroduction efforts on NFS lands are typically led by the U.S. Fish and Wildlife Service, in coordination with the Forest Service, the fish and game agencies from the affected States, and any other agencies with jurisdictional responsibilities.

During the development of alternatives for the DEIS, prohibitions on a variety of other activities within inventoried roadless, including grazing, were considered. The agency determined that only those uses and activities that are likely to significantly alter landscapes and cause landscape fragmentation on a national scale should be considered for prohibition in this proposal. Grazing was not identified as posing the same level of national risk for adversely affecting roadless areas, compared to road construction and timber harvest (DEIS pp. 1-10 through 1-11). The impacts of grazing activities would continue to be addressed as part of forest and grassland plan and allotment management plan development.

72. *The Forest Service should consider the impacts of cattle on springs, streams, and native grasses.*

Response: During the development of alternatives for the DEIS, prohibitions on a variety of other activities within inventoried roadless, including grazing, were considered. The agency determined that only those uses and activities that are likely to significantly alter landscapes and cause landscape

fragmentation on a national scale should be considered for prohibition in the range of alternatives for this proposal. Grazing was not identified as posing the same level of national risk for adversely affecting roadless areas, compared to road construction and timber harvest (DEIS pp. 1-10 through 1-11). The impacts of grazing activities would continue to be addressed as part of forest and grassland plan and allotment management plan development.

73. *The Forest Service should not pay hunters to kill animals to make the public lands safe for sheep and cows.*

Response: The predator damage management program is administered by the Animal and Plant Health Inspection Service, Wildlife Services section, in the Department of Agriculture. The Forest Service does not provide funding for this program.

74. *The Forest Service should use tools such as controlled burning to aid declining elk herds.*

Response: Use of prescribed fire to enhance stand structure and improve forage would continue to be an important tool available for use in inventoried roadless areas under all alternatives, although costs and effectiveness may vary by alternative (DEIS pp. 3-98 through 3-107). With a prohibition on road construction, other means of access may need to be used. However, as roads have rarely been constructed on NFS lands for implementation of prescribed fire projects, such projects would likely proceed without road construction regardless of the alternative selected.

Other Concerns

75. *The Forest Service should address the relationship of the proposed rule with the proposed forest/wildlife grid.*

Response: The Forest Service is not aware of a proposal for a nationwide forest/wildlife grid. At this time, the Forest Service has two proposed rules being analyzed – one that addresses the Forest Service Roads Policy, and this one which addresses roadless area conservation. The cumulative effects of these rules were addressed in the DEIS, pp. 3-240 through 3-242, and have been expanded upon in the FEIS.

76. *The proposed rule should ensure protection for the Chugach National Forest including the Copper River Delta.*

Response: As described in the DEIS and FEIS, this proposal would apply to inventoried roadless areas located within the Chugach National Forest. Regardless of which alternative is selected, additional measures needed to protect the Copper River Delta area could be identified during forest plan revision or area-specific project planning.

End of Terrestrial and Aquatic Habitat Section