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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WASHINGTON

CONSERVATION NORTHWEST and WILDEARTH GUARDIANS,	)	
Plaintiffs,	)	Case Number:
v.	)	
U.S. FOREST SERVICE and RODNEY SMOLDON, Forest Supervisor, Colville National Forest,	)	COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF
Defendants.	)	

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I. INTRODUCTION.

1. This case challenges the decision of the U.S. Forest Service (the "Forest Service") to open one-hundred and seventeen miles of roads in the Colville National Forest (the "Colville") to all vehicle uses, including wheeled all-terrain vehicles ("WATVs"). WATVs are recreational vehicles that can be driven on or off roads and that are often driven through public forests like the Colville. In general, forest roads in the Colville are closed to vehicle use unless the Forest Service opens them to vehicle use through formal agency action. In 2019, the Colville changed the designations for twenty-six road segments from one that only allowed use by highway-legal vehicles to one that allows use by all kinds of vehicles, including WATVs. Although the Forest Service recognized these changes would increase access to and use of forest roads on the Colville—although it recognized "there is much local interest from individual users, motorized user groups, and state and local government" to create loop rides "that connect areas of interest like overlooks, recreational locations, towns and other locations"—the Forest Service failed to provide formal notice and a formal opportunity to comment on the proposed changes, and failed to consider the environmental impacts of increased WATV use in the Colville, before opening the roads.

2. This case challenges the Forest Service's decision and the new motor vehicle use maps the Forest Service published in 2020 to reflect the new vehicle

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class designations. Plaintiffs allege Defendants violated Section 7 of the Endangered Species Act, 16 U.S.C. § 1536, by failing to consider whether the new designations may affect imperiled wildlife, including Canada lynx, bull trout, grizzly bears, woodland caribou, and Western yellow-billed cuckoo. Plaintiffs allege Defendants violated the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.* ("NEPA"), by failing to provide sufficient public notice and an opportunity to comment on the proposed action before adoption, and by failing to meaningfully consider the environmental impacts of the new road designations. And Plaintiffs allege Defendants violated the Forest Service's Travel Management Rule, 36 C.F.R. Part 212 ("TMR"), by failing to conduct a NEPA process and consider relevant criteria before revising the road designations.

3. The Forest Service adopted the new motor vehicle use designations without grappling with the consequences of the changes through a public, environmental review process, as governing law requires. This approach stands in stark contrast with how the Colville and other forests typically revise motorized use designations. Plaintiffs are concerned that the Defendants' failures here may harm the Colville, and may also encourage the adoption of future revisions without the required public process and environmental review. Accordingly, Plaintiffs seek declaratory and injunctive relief to invalidate the new road use designations and use maps, as well as an award of costs and attorneys' fees.

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II. JURISDICTION AND VENUE.

4. Plaintiffs bring this action pursuant to the citizen suit provisions of the Endangered Species Act, 16 U.S.C. § 1540(g), and the judicial review provisions of the Administrative Procedure Act, 5 U.S.C. §§ 701-706 (the "APA"). This Court has jurisdiction pursuant to 16 U.S.C. § 1540(g) and 28 U.S.C. § 1331 (federal question), § 2201 (declaratory judgment), and § 2202 (further relief), § 2412 (costs and fees) and § 1346 (United States as a defendant). Defendants' 2019 decision to change road designations in the Colville is final agency action that is subject to judicial review under the APA. The motor vehicle use maps Defendants published in 2020 and that adopt the 2019 changes are final agency actions that are subject to judicial review under the APA. An actual, justiciable controversy exists between Plaintiffs and Defendants.

5. Venue is proper in this district under 28 U.S.C. § 1391 because all or a substantial part of the events or omissions giving rise to the claims herein occurred within this judicial district, in Colville, Washington, and because Defendants' offices are located in this district.

6. The United States waived sovereign immunity in this action pursuant to 5 U.S.C. § 702.

7. Plaintiffs satisfied the jurisdictional requirements for bringing their Endangered Species Act ("ESA") claims. In accordance with 16 U.S.C. §

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1540(g)(2), by certified letter dated and postmarked September 14, 2020, Plaintiffs notified Defendants of their alleged violations of the ESA and of Plaintiffs' intent to sue for those violations ("Notice Letter"). More than sixty days have passed since Plaintiffs mailed the Notice Letter. A copy of the Notice Letter is attached to this complaint as Exhibit 1 and is hereby incorporated by reference.

III. PARTIES.

8. Plaintiff CONSERVATION NORTHWEST is a regional conservation and membership organization based in Washington State with a mission to protect and connect habitat, and to restore imperiled wildlife, from the Pacific Coast to the Canadian Rockies. Conservation Northwest has over 17,000 members and supporters, many of whom visit and enjoy the Colville National Forest. Conservation Northwest maintains offices around the state of Washington, including in Deer Park and Chewelah in northeast Washington. Conservation Northwest engages in science-based advocacy, and works on the ground to engage scientists, agencies, and communities to develop and enact projects that protect wildlife habitat and restore ecological resilience in forests and watersheds. Conservation Northwest has a deep and longstanding interest in the Colville National Forest, where it has worked in collaboration with stakeholders and the Forest Service on multiple projects related to forest and aquatic restoration, motorized recreation, and wildlife research and recovery. Conservation Northwest

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is an active voice strongly advocating for Canada lynx, grizzly bear, wolf, wolverine, and woodland caribou conservation. Conservation Northwest and its members have procedural interests in ensuring that all Forest Service activities comply with all applicable federal statutes and regulations.

9. Plaintiff WILDEARTH GUARDIANS ("Guardians") is a non-profit membership organization dedicated to protecting and restoring the wildlife, wild places, wild rivers, and health of the American West. Guardians has more than 188,000 members and supporters across the West, including many who reside in the state of Washington and who visit the Colville. Guardians maintains offices in several states, including in Seattle, Washington. Guardians has organizational interests in the proper and lawful management of motorized use on the Colville. Guardians has a long history of working to protect and restore native wildlife species across the West, including but not limited to Canada lynx, bull trout, grizzly bears, woodland caribou, and Western yellow-billed cuckoo. Guardians and its members have procedural interests in ensuring that all Forest Service activities comply with all applicable federal statutes and regulations.

10. Plaintiffs bring this action on their own behalf and on behalf of their members and supporters, some of whom live in or near areas affected by the new motorized use designations on the Colville or visit the area for hiking, camping,

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photography, seeking solitude in nature, observing wildlife in quiet, secure, native ecosystems, and other recreational and professional pursuits.

11. Plaintiffs' members, supporters, and staff gain aesthetic enjoyment from observing, attempting to observe, hearing, seeing evidence of, or studying Canada lynx, bull trout, grizzly bears, or Western yellow-billed cuckoo, including observing signs of these species' presence in the Colville and surrounding areas and observing ecosystems enhanced by these animals. The opportunity to possibly view Canada lynx, bull trout, grizzly bears, woodland caribou, or Western yellow-billed cuckoo, or signs of these animals, in these areas is of significant interest and value to Plaintiffs' members, supporters, and staff, and increases their use and enjoyment of public lands. Plaintiffs, as well as their members, supporters, and staff, are dedicated to ensuring the long-term survival and recovery of the Canada lynx, bull trout, grizzly bears, woodland caribou, and Western yellow-billed cuckoo throughout the contiguous United States, and specifically in the Pacific Northwest.

12. Plaintiffs' members, supporters, and staff have engaged in the activities described above in the past, and intend to do so again in the near future. Defendants' decision approves new motorized use designations and activities that will significantly degrade the natural values currently enjoyed by Plaintiffs and their members, supporters, and staff. Increased motorized use will disrupt

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otherwise quiet landscapes, disturb wildlife, and degrade habitat. The legal violations alleged in this Complaint therefore cause direct injury to the aesthetic, conservation, recreational, scientific, educational, inspirational, and wildlife preservation interests of Plaintiffs and their members, supporters, and staff.

13. Plaintiffs' members, supporters, and staff have an interest in ensuring the Forest Service complies with all applicable federal statutes and regulations in making new motorized use designations on public lands. Plaintiffs and their members, supporters, and staff have an interest in ensuring the Forest Service follows legally required procedures that involve the public, and that it takes the requisite hard look at impacts from new motorized use designations to mitigate potential harms to quiet recreation, imperiled wildlife, and important wildlife habitat on the Colville. Plaintiffs' members, supporters, and staff have an interest in ensuring that the Forest Service fulfills its obligation to manage the Colville in a manner that does not impair native wildlife that inhabit these National Forest lands.

14. The interests of Plaintiffs, their members, supporters, and staff have been, are being, and, unless the relief prayed for in this Complaint is granted, will continue to be adversely and irreparably injured by Defendants' failure to comply with federal law. These are actual, concrete injuries, traceable to Defendants' conduct, that would be redressed by the requested relief. Plaintiffs have no other adequate remedy at law.

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15. Defendant U.S. FOREST SERVICE is a federal agency of the United States within the U.S. Department of Agriculture. The Forest Service is responsible for managing National Forest lands, including the Colville, and ensuring that Forest Service activities comply with the ESA, NEPA, and the TMR. The Forest Service exercised discretion or control in making the decisions challenged herein.

16. Defendant RODNEY SMOLDON is the Forest Supervisor for the Colville. Defendant Smoldon is responsible for management of the Colville and the Colville's compliance with the ESA, NEPA, and the TMR. Defendant Smoldon exercised discretion or control in making the decisions challenged herein. Plaintiffs are suing Defendant Smoldon in his official capacity.

IV. LEGAL BACKGROUND.

A. The Endangered Species Act.

17. "The ESA is 'the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.' It represents a commitment 'to halt and reverse the trend toward species extinction, whatever the cost.'" *Ctr. for Biological Diversity v. Zinke*, 900 F.3d 1053, 1059 (9th Cir. 2018) (quoting *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180, 184 (1978)) (internal citation omitted).

18. Congress enacted the ESA "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be

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conserved ... [and] to provide a program for the conservation of such endangered species and threatened species[.]" 16 U.S.C. § 1531(b).

19. Sections 4(a) and 4(c) of the ESA, 16 U.S.C. §§ 1533(a), (c), require the federal agencies that implement the ESA to determine whether any species is "threatened" or "endangered" and, if so, to list that species as being subject to the protections of the ESA. Section 4(a)(3) of the ESA, 16 U.S.C. § 1533(a)(3), then requires the federal agencies that implement the ESA to designate "critical habitat" for species listed as threatened or endangered.

20. Section 7(a)(2) of the ESA requires federal agencies such as the Forest Service to ensure that any action they authorize, fund, or carry out is not likely to jeopardize ESA-listed species or destroy or adversely modify critical habitat designated for such species. 16 U.S.C. § 1536(a)(2). The term jeopardize means "to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of the species." 50 C.F.R. § 402.02.

21. Before undertaking, funding, or authorizing any action that may affect ESA-listed species or their critical habitat, the Forest Service must consult with the appropriate expert fish and wildlife agency, which in the case of Canada lynx, bull trout, grizzly bears, woodland caribou, and Western yellow-billed cuckoo is the

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U.S. Fish and Wildlife Service ("FWS"). *See* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.01(b).

22. The ESA's consultation requirement applies "to all actions in which there is discretionary Federal involvement or control." 50 C.F.R. § 402.03.

23. If species listed under the ESA may be present in the area of agency action, the action agency must prepare a "Biological Assessment" or "Biological Evaluation" to determine whether a listed species may be affected by the proposed action. *See* 16 U.S.C. § 1536(c)(1); 50 C.F.R. § 402.12.

24. If the action agency concludes in the Biological Assessment that the activity is not likely to adversely affect the listed species or adversely modify its critical habitat, and FWS concurs with that conclusion in a "Letter of Concurrence," then the consultation is complete. 50 C.F.R. §§ 402.12; 402.14(b). If, however, the action agency or FWS determines that the activity is likely to adversely affect listed species or its critical habitat, then FWS must complete a "Biological Opinion" to determine whether the activity will jeopardize the species or result in destruction or adverse modification of critical habitat. *Id*. § 402.14.

25. During consultation, the ESA prohibits federal agencies from making any irreversible or irretrievable commitment of resources with respect to the proposed agency action that would have the effect of foreclosing the formulation

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or implementation of any reasonable and prudent alternative measures that would not violate Section 7(a)(2) of the ESA. 16 U.S.C. §§ 1536(d).

26. Once the consultation process is complete, the agencies have a duty to ensure that it remains valid. Accordingly, federal action agencies must re-initiate ESA consultation if "new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered," if the action "is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion," or if "a new species is listed or critical habitat designated that may be affected by the identified action." 50 C.F.R. § 402.16.

B. The National Environmental Policy Act.

27. NEPA "is our basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). NEPA has two fundamental purposes: (1) to guarantee that federal agencies take a "hard look" at the consequences of their actions before the actions occur, to ensure that "the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts"; and (2) to ensure that "the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

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28. To that end, NEPA requires federal agencies to prepare a detailed Environmental Impact Statement ("EIS") for all major federal actions that may significantly affect the quality of the human environment. 42 U.S.C. § 4332(2)(C).

29. Under the Forest Service's NEPA regulations, a proposal is subject to NEPA when: (1) the agency has a goal and is actively preparing to make a decision on one or more alternative means to accomplish that goal and effects can be meaningfully evaluated; (2) the proposed action is subject to Forest Service control and responsibility; (3) the proposed action would cause effects on the environment; and (4) the proposed action is not statutorily exempt from the requirements of section 102(2)(C) of NEPA. 36 C.F.R. § 220.4(a).

30. The Forest Service's NEPA regulations require scoping in accordance with the requirements of 40 C.F.R. § 1501.7 for all proposed Forest Service actions, including those that may be categorically excluded from further analysis and documentation in an Environmental Assessment ("EA") or EIS. 36 C.F.R. § 220.4(e).

31. If a proposed agency action is not subject to a categorical exclusion ("CE"), then the agency must prepare an EA to determine whether it needs to prepare an EIS. 40 C.F.R. §§ 1501.4(b), 1508.4, 1508.9; *see also* 36 C.F.R. § 220.6(c). An EA is a concise public document that briefly describes the proposal, examines alternatives, considers environmental impacts, and provides a list of

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individuals and agencies consulted. 40 C.F.R. § 1508.9. If the agency concludes there is no significant impact associated with the proposed project or activity, it may issue a Finding of No Significant Impact ("FONSI") in lieu of preparing an EIS. 40 C.F.R. § 1508.9(a)(1).

32. NEPA analyses must consider a range of reasonable alternative actions and thoroughly assess direct, indirect, and cumulative environmental effects of the proposed alternative actions. 42 U.S.C. § 4332(2)(C); 40 C.F.R. Parts 1502 and 1508.

C. The Travel Management Rule.

33. From 1982 to 2000, off-road vehicle ("ORV") use in the United States increased by over 109 percent, with all-terrain vehicle use growing 40 percent between 1997 and 2001. 70 Fed. Reg. 68,264, 68,285 (Nov. 9, 2005) (Travel Management Rule, codified at 36 C.F.R. pt. 212, 251, 261, and 295). As a consequence, in 2005, the Forest Service overhauled the travel planning process and finalized its "Travel Management Rule," which is codified at 36 C.F.R. Part 212. *Id.* at 68,264. The TMR was meant to revise outdated rules and to minimize adverse impacts from ORVs in all National Forests in light of "growing popularity and capabilities of [ORV]s . . . so that the Forest Service [could] continue to provide these opportunities while sustaining the health of [National Forest System] lands and resources." *Id.* at 68,265.

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34. The TMR requires that "[m]otor vehicle use on National Forest System roads, on National Forest System trails, and in areas on National Forest System lands shall be designated by vehicle class and, if appropriate, by time of year by the responsible official on administrative units or Ranger Districts of the National Forest System." 36 C.F.R. § 212.51(a).

35. All motorized use designations, including revisions of classes of vehicles that may use a particular road, are to be made only after completion of a public process that includes notice and comment consistent with agency procedures under NEPA. 36 C.F.R. § 212.52(a).

36. Under the TMR's "[g]eneral criteria for designation of" roads, trails, and areas, the Forest Service:

> . . . shall consider effects on National Forest System natural and cultural resources, public safety, provision of recreational opportunities, access needs, conflicts among uses of National Forest System lands, the need for maintenance and administration of roads, trails, and areas that would arise if the uses under consideration are designated; and the availability of resources for that maintenance and administration.

36 C.F.R. § 212.55(a).

37. The rule also includes "[s]pecific criteria for designation of roads" under which the Forest Service "shall consider: (1) Speed, volume, composition, and distribution of traffic on roads; and (2) Compatibility of vehicle class with road geometry and road surfacing." 36 C.F.R. § 212.55(c).

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38. The route designation process culminates in the Forest Service's adoption and publication of a use map "reflecting designated roads, trails, and areas" that can be used by motor vehicles in the forest. 36 C.F.R. §§ 212.1, 212.50, 212.56. The use map may cover an entire forest or individual ranger district, and it depicts routes that are open to motor vehicle use. The Forest Service's publication of a use map completes the designation process and results in the official and enforceable prohibition of motor vehicle use anywhere off of the designated system. 36 C.F.R. § 261.13.

39. The Forest Service may subsequently revise the designations, but revisions "shall be made in accordance with the requirements for public involvement in [36 C.F.R.] § 212.52, the requirements for coordination with governmental entities in [36 C.F.R.] § 212.53, and the criteria in [36 C.F.R.] § 212.55, and shall be reflected on a motor vehicle use map pursuant to [36 C.F.R.] § 212.56." 36 C.F.R. § 212.54.

V. FACTUAL BACKGROUND.

A. The Colville National Forest.

40. The Colville National Forest is located in Ferry, Stevens, Pend Oreille, and Okanogan Counties in northeast Washington. It is bordered to the north by British Columbia, Canada, to the west by the Okanogan-Wenatchee National Forest, to the east by the Idaho Panhandle National Forests, and to the

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south by a portion of the Confederated Tribes of the Colville Reservation. Visitors to the Colville National Forest seek out diverse recreational opportunities, including hiking, camping, skiing, mountaineering, biking, hunting, fishing, and wildlife viewing.

41. A diverse array of fish, wildlife and plants may be present on, inhabit, or utilize the Colville, including Canada lynx, bull trout, grizzly bears, and Western yellow-billed cuckoo. FWS listed Canada lynx as threatened under the ESA in 2000. 65 Fed. Reg. 16,052 (March 24, 2000). FWS listed bull trout as threatened in 1999. 64 Fed. Reg. 58,910 (Nov. 1, 1999). FWS designated bull trout critical habitat on the Colville in 2010. 75 Fed. Reg. 63,898 (Oct. 18, 2010). In 1975, FWS listed grizzly bears as threatened. 40 Fed. Reg. 31,734 (July 28, 1975). FWS listed the southern Selkirk population of woodland caribou as endangered in 1984. 49 Fed. Reg. 7,390 (Feb. 29, 1984). FWS designated critical habitat for woodland caribou on the Colville in 2012. 77 Fed. Reg. 71,042 (Nov. 28, 2012). FWS listed the Western yellow-billed cuckoo as threatened in 2014. 79 Fed. Reg. 59,992 (Oct. 3, 2014).

B. Motorized Recreational Use Impacts.

42. Off-road vehicles including WATVs are designed, manufactured, marketed, and sold for off-road travel.

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43. Motorized recreational use, including the use of WATVs, may result in numerous adverse environmental impacts. Motorized recreational use may degrade water quality and riparian health. Motorized recreational use may degrade air quality. Motorized recreational use may damage soils and vegetation. Motorized recreational use may spread invasive weeds. Motorized recreational use may harm fish. Motorized recreational use may harm wildlife. Motorized recreational use may cause wildfires. Motorized recreational use may harm cultural resources.

44. The noise of engines from motorized use may disrupt otherwise quiet forest landscapes. Recreational motorized use with high traffic volume may increase disruption of otherwise quiet forest landscapes. When travelling in groups, WATVs create even more noise and disruption. Recreational motorized use with high traffic speed may increase risks to public safety.

45. Motorized recreational use in the Colville may impair non-motorized recreationists' ability to enjoy natural sights, sounds, and smells. Adverse impacts from motorized recreational use is often disproportionately felt by non-motorized recreationists. Increased motorized recreational use in the Colville may create safety hazards for others.

46. Recreational motorized use of roads may fragment wildlife habitat. Recreational motorized use of roads may displace wildlife due to noise or the

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presence of motorized engines in an otherwise quiet forest landscape. Recreational motorized use of roads may cause collisions between wildlife and vehicles. Recreational motorized use of roads may kill wildlife.

47. Not all operators of off-road vehicles, including WATVs, stay on designated roads or trails.

C. Motorized Use on the Colville.

48. In 2008, the Forest Service amended the 1988 Colville Forest Plan, to allow motor vehicle use only on designated roads, trails, and areas, and issued a forest-wide motor vehicle use map. The Forest Service referred to that amendment as Amendment #31. Those changes were required by the TMR. Under Amendment #31, prior to the decisions challenged in this case, the roads at issue in this case were only open to highway-legal vehicles and they were not open to WATVs.

49. The Forest Service prepared an EA that analyzed expected impacts before it adopted Amendment #31. The Forest Service hosted numerous public meetings between 2005 and 2007 to discuss the proposed Amendment #31. Before adopting Amendment #31, the Forest Service listed the proposal to amend the Forest Plan in its formal Schedule of Proposed Actions ("SOPA") for the Colville. The Forest Service provided legal notice of the proposed Amendment #31 in the local newspaper and in a letter sent to the Colville's travel management mailing list. The Forest Service provided a comment period for the proposed Amendment

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#31, and responded in writing to comments received. The Forest Service prepared a Biological Evaluation that assessed impacts to ESA-listed species before it adopted Amendment #31. The Biological Evaluation concluded Amendment #31 would result in beneficial effects to gray wolf, grizzly bear, Canada lynx, woodland caribou, and bull trout. FWS concurred with the Forest Service's determination in the Biological Evaluation.

50. In 2014, the Forest Service completed an EA for the South End Project on the Colville that, among other things, changed the vehicle use designations on 177 miles of roads from one that only allowed use by highway-legal vehicles to one that allows use by all kinds of vehicles, including WATVs. The Forest Service listed the South End Project proposal in its formal SOPA for the Colville. The Forest Service provided notice of the proposed South End Project in two local newspapers and a letter sent to individuals and groups that expressed interest in this type of project. The Forest Service held three public meetings about the proposed South End Project. The Forest Service provided a comment period on its EA for the proposed South End Project. In response to an appeal from Conservation Northwest and others, the Forest Service withdrew its initial decision on the South End Project and prepared a supplemental analysis to more fully consider impacts to resources and wildlife. The Forest Service provided notice in a scoping letter asking for comments on the supplemental EA for the South End

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Project. The Forest Service prepared a Biological Evaluation to assess impacts of the South End Project to ESA-listed species.

D. The 2019 Designations and 2020 Use Maps.

51. The vehicle use designations challenged in this lawsuit came about because certain groups lobbied the Colville to open more roads to WATV use. The Tri-County Motorized Recreation Association—a local motorized use group—first identified specific routes in a proposal to change vehicle class designations on certain road segments within the Colville.

52. The Tri-County Motorized Recreation Association proposed the new vehicle use class designations to the Forest Service at a Tri-County Forest Group meeting. The Tri-County Forest Group is a group of local county commissioners. The Tri-County Forest Group gathers each month to share thoughts about recreation, timber, grazing, and other activities in northeast Washington.

53. In May of 2019, the Forest Service stated on its website that it was considering revising vehicle use class designations for the Colville. The Forest Service stated in an email in May 2019 that the website announcement was "not scoping, [or] a formal comment period." The Forest Service stated that it was not preparing an Environmental Assessment for its proposed action. In 2019 and 2020, the Forest Service did not include the proposed new vehicle use class designations or proposed changes to its use maps in its formal SOPA for the Colville. In 2019

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and 2020, the Forest Service did not publish a press release announcing the proposed new vehicle use class designations or proposed changes to its use maps for the Colville. In 2019 and 2020, the Forest Service did not provide notice of these proposed actions to the people and entities to which it normally sends notice of agency actions proposed for the Colville.

54. The new vehicle use designations involve roads located in rural areas. People who may have an interest in the changed designations rely on the Forest Service's process of providing public notice of proposed actions to be alerted about potential changes to management on the Colville. Because the Forest Service did not follow required public processes, the public was not given sufficient notice or opportunity to meaningfully comment on impacts of the proposed vehicle use designations.

55. In September of 2019, Defendant Rodney Smoldon signed a document entitled "Rationale and Justification for MVUM changes 2019" (hereinafter "Decision"). The Decision is attached to Plaintiffs' notice letter. *See* Attachment 1 to Exhibit 1. The Decision stated that the Forest Service was modifying the designated class of vehicles allowed on specific roads within the Colville. The Decision stated that the "proposal will not cause effects that can be meaningfully evaluated on the environment or the relationship of people to that environment." The Forest Service issued a table with the Decision that showed

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how the Decision changed vehicle use class designations as compared to the previous use maps.

56. The Decision changed the vehicle use class designations for 26 road segments from "Roads Open to Highway Legal Vehicles" to "Roads Open to All Vehicles." The Decision opened 117 miles of roads to all vehicles, including WATVs.

57. In the Decision, the Forest Service stated there is a need for change due to disconnected routes, public interest, and local elected officials' interest. In the Decision, the Forest Service explained that of the more than 700 miles of motorized use routes on the Colville, many of the routes are less than 5 miles long, and only a small percentage create loop rides or make connections to longer routes. The Forest Service stated in the Decision that "there is much local interest from individual users, motorized user groups, and state and local government to create a system of motorized routes that are authorized for all vehicles that create loops of a size to create interest in the rides and that connect areas of interest like overlooks, recreational locations, towns and other locations." The Forest Service stated in the Decision that "the boards of county commissioners support a more common sense, and complete set of routes for motorized recreation" that will "offer opportunities for loops, connectors, and longer rides."

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58. On April 1, 2020, the Forest Service published new motor vehicle use maps that adopted the vehicle use class designation changes announced in the Decision.

59. The Decision and 2020 use maps opened roads to all vehicles that provide connections to other roads, trails, or areas designated for off-road vehicle use. The Decision and 2020 use maps created new opportunities for motorized recreation in a loop, as opposed to out-and-back rides, for all vehicles including WATVs in the Colville. Loop rides can be more desirable compared to out-and-back rides for WATVs. Some of the new loops created by the Decision and 2020 use maps cross Inventoried Roadless Areas that are categorized as motorized backcountry in the Colville Forest Plan. Two of the motorized backcountry areas with new designations include Owl Mountain and Twin Sisters. Motorized routes had previously been designated in Owl Mountain and Twin Sisters. The new designations connect to the existing designated motorized routes to create loop rides within Owl Mountain and Twin Sisters. The Decision and 2020 use maps opened roads to all vehicles that connect to longer WATV routes in the Colville. The following is an illustrative map that shows how the new designations, which are shown in orange lines, create loops and longer rides by connecting to other routes designated for motorized use by all vehicles:

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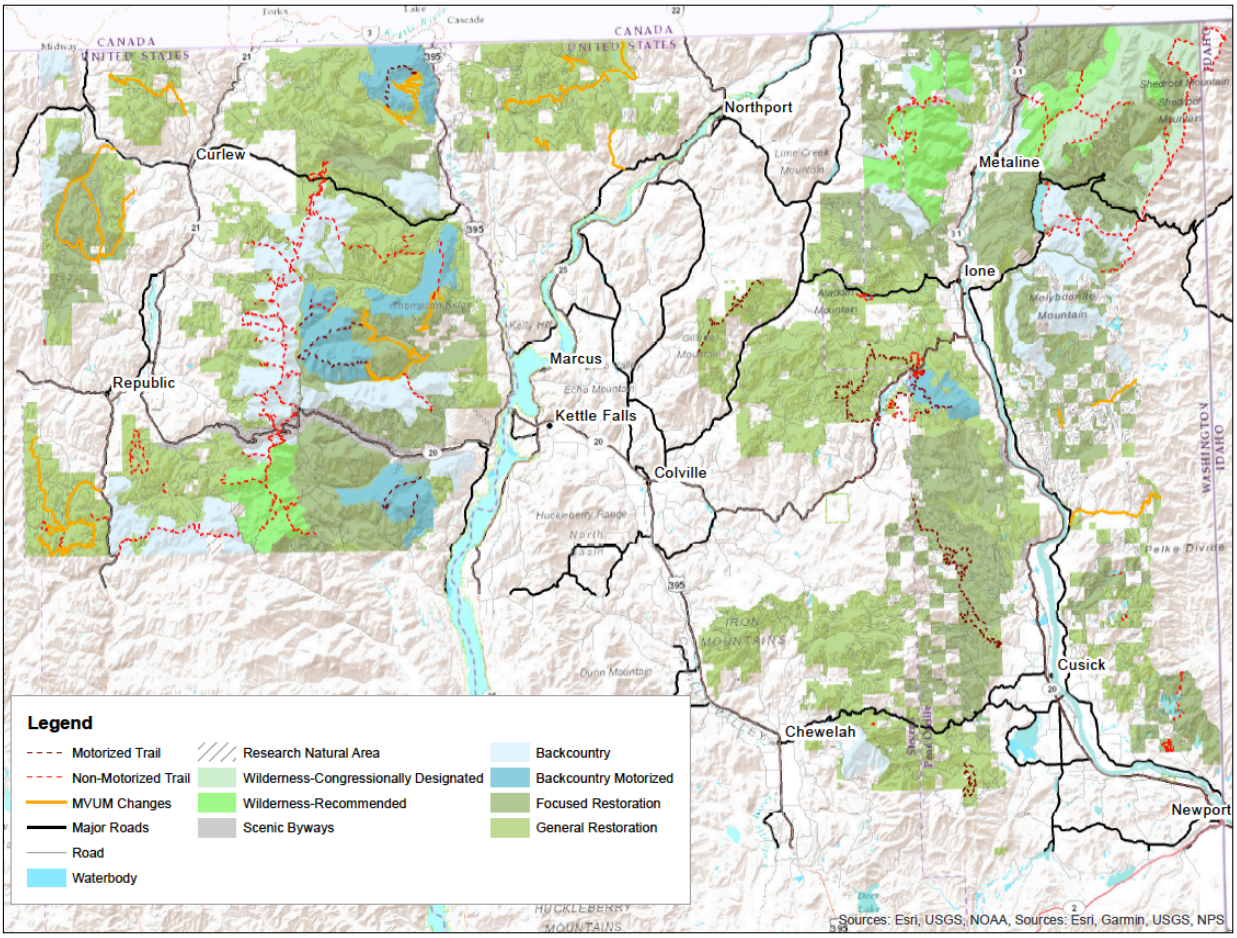

60. The Forest Service intended for the Decision and 2020 use maps to increase motorized recreational vehicle access to the Colville. The Decision and 2020 use maps authorized new motorized recreational vehicle access to the Colville. The Decision and 2020 use maps increased motorized recreational vehicle use in the Colville.

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61. When considered in combination with the increased popularity of riding off-road vehicles, the Decision and 2020 use maps will continue to result in increased use of off-road vehicles including WATVs on the Colville.

62. Increased motorized recreational use on the Colville will disrupt otherwise quiet forest landscapes more often. Increased motorized recreational use on the Colville will disturb other people seeking solitude on the forest. The Decision and 2020 use maps and resulting increase in motorized recreational use on the Colville may significantly impact wildlife. The Decision and 2020 use maps and resulting increase in motorized recreational use on the Colville may significantly impact wildlife habitat. The Decision and 2020 use maps and resulting increase in motorized recreational use on the Colville will disturb wildlife. The Decision and 2020 use maps and resulting increase in motorized recreational use on the Colville will disrupt wildlife habitat. The Decision and 2020 use maps and resulting increase in motorized recreational use on the Colville will displace wildlife.

63. Because the Decision and 2020 use maps create loops and longer rides by connecting roads and trails designated for all vehicles including WATVs, impacts from the Decision and 2020 use maps will not be limited to the road system itself. Impacts from the Decision and 2020 use maps will occur on the trails and surrounding areas connected into loops or longer rides by the new

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designations. By designating roads that connect trails and surrounding areas as open to all vehicles, including WATVs, the Decision and 2020 use maps will increase recreational motorized use of the connected trails and surrounding areas. The Decision and 2020 use maps will increase recreational motorized use off of the road system. As a result of increasing recreational motorized use and creating connections that involve off-road trails, the Decision and 2020 use maps may result in increased risk of illegal, off-road use. The Decision and 2020 use maps may result in increased adverse impacts to vegetation, soils, wildlife, and habitat off of the road system.

64. On or around June 16, 2020, the Forest Service issued a press release that noted "increased damage of Delaney and Calispell meadows due to motor vehicles operating off designated roads." The Forest Service's June 16, 2020 press release is attached hereto as Attachment 4 to Exhibit 1.

65. The Decision and 2020 use maps opened to WATVs roads that are located in areas where species listed as threatened or endangered under the ESA may be present. The Decision and 2020 use maps opened to WATVs roads that are located in areas designated as critical habitat under the ESA. The Forest Service did not consider or address impacts to ESA-listed species or designated critical habitat before making the Decision or issuing the 2020 use maps.

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66. The Decision and 2020 use maps opened to WATVs roads that are located in areas where Canada lynx may be present. The Decision and 2020 use maps may adversely affect Canada lynx by allowing increased motorized use that may result in habitat fragmentation. The Decision and 2020 use maps may adversely affect Canada lynx by allowing increased motorized use that may result in displacement of lynx. The Decision and 2020 use maps may adversely affect Canada lynx by allowing increased motorized use that may result in noise disruption to Canada lynx. The Decision and 2020 use maps may adversely affect Canada lynx by allowing increased motorized use that increases the risk of vehicle collision with lynx. The Decision and 2020 use maps authorize increased human access to the Colville via forest roads, allowing for more hunting and, as a result, increases the risk of lynx mortality.

67. The Decision and 2020 use maps opened to WATVs roads that are located in areas where bull trout may be present. The Decision and 2020 use maps opened to WATVs roads that are adjacent to or that cross designated bull trout critical habitat. The Decision and 2020 use maps may adversely affect bull trout and its designated critical habitat. Unpaved roads on the Colville are a primary source of erosion and sedimentation of streams as compared to other management activities in the Forest. Accumulation of fine sediment is detrimental to bull trout habitat. As part of its Decision, the Forest Service opened Forest Road No.

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1935000 to WATVs and other vehicles. Forest Road No. 1935000 runs adjacent to Harvey Creek and crosses it several times; it crosses West Branch LeClerc Creek, Saucon Creek, and several of its tributaries; and it crosses Middle Branch LeClerk Creek. Harvey Creek and LeClerk Creek are designated bull trout critical habitat. The Decision opened Forest Road No. 1200000 to WATVs and other vehicles. Forest Road No. 1200000 crosses Mill Creek several times. Mill Creek is designated bull trout critical habitat and a tributary to the Pend Oreille River, which is also designated bull trout critical habitat. All of these streams are within watersheds identified by the Forest Service as either "Functioning at Risk" or "Not Properly Functioning" for bull trout.

68. The Decision and 2020 use maps opened to WATVs roads that are located in areas where grizzly bear may be present. The Decision and 2020 use maps may adversely affect grizzly bears. Authorizing increased motorized use, including use of WATVs, may result in increased human-caused mortality, habitat displacement, habitat fragmentation, and direct habitat loss for grizzly bears. Grizzly bears are adversely impacted by motorized use through direct mortality from vehicle strikes and illegal harvest, and indirect mortality resulting from habituation to humans. Grizzly bears are also adversely impacted by roads through avoidance of key habitat as they attempt to move away from roads and road activity; displacement from key habitat as they attempt to move away from roads

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and road activity; and modification and fragmentation of their core habitat due to roads and road construction. The presence of roads to human population centers and the presence of dispersed motorized recreation in habitat around roads poses risks to grizzly bears. Human activities can displace grizzly bears from seasonal habitats, especially in riparian areas and wet meadows where recreation and grizzly bears may overlap seasonally.

69. The Decision and 2020 use maps opened to WATVs roads that are located in areas where woodland caribou have been present in the past and could be present in the future. The Decision and 2020 use maps may adversely affect woodland caribou. Roads, and motorized use of roads, may disrupt woodland caribou or fragment woodland caribou habitat. The Decision and 2020 use maps authorize WATV use on roads that go through caribou recovery habitat.

70. The Decision and 2020 use maps opened to WATVs roads that are located in areas where Western yellow-billed cuckoo may be present. The Decision and 2020 use maps may adversely affect Western yellow-billed cuckoo. Forest Service activities that directly influence the quality and availability of habitat for the riparian-dependent Western yellow-billed cuckoo include management of forest roads, recreation sites, and vegetation treatments that occur within riparian habitats. Altered hydrology of riverine systems from channelization, and by disturbance from activities associated with road use and recreation, construction,

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and maintenance, impact wildlife habitat by making systems less dynamic. These activities can reduce effectiveness and connectivity of riparian habitat, disturb sensitive soils, and increase sediment delivery to streams, and thereby adversely affect habitats that may be used by Western yellow-billed cuckoo.

71. The Forest Service did not consult with FWS under Section 7 of the ESA, 16 U.S.C. § 1536, about the Decision or the 2020 use maps. The Forest Service did not prepare a Biological Assessment or Biological Evaluation to consider the impacts of the Decision or the 2020 use maps on species listed as threatened or endangered under the ESA. The Forest Service did not prepare a Biological Assessment or Biological Evaluation to consider the impacts of the Decision or the 2020 use maps on critical habitat designated under the ESA.

VI. CLAIMS.

FIRST CLAIM FOR RELIEF

VIOLATIONS OF THE ENDANGERED SPECIES ACT

72. Plaintiffs reallege and incorporate by reference all allegations in the preceding paragraphs.

73. Under the ESA, the Forest Service must ensure that the actions it takes will not jeopardize the survival of any listed species or result in the destruction or adverse modification of designated critical habitat. 16 U.S.C. §

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1536(a)(2). To meet this requirement, the Forest Service must consult with FWS about proposed actions that "may affect" listed species or designated critical habitat, and it must complete such consultation before proceeding with a proposed action. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

74. Defendants violated Section 7 of the ESA, 16 U.S.C. § 1536, by failing to initiate and complete consultation before adopting the Decision and publishing the 2020 use maps because those actions "may affect" ESA-listed species or designated critical habitat.

75. In the alternative, Defendants violated Section 7 of the ESA, 16 U.S.C. § 1536, by failing to reinitiate and complete consultation before adopting the Decision and publishing the 2020 use maps. The Decision and 2020 use maps constitute new information that reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered. The Decision and 2020 use maps modified the Forest Service's motorized use designations on the Colville in a manner that causes effects to listed species or critical habitat that were not considered in any previous consultation. Since 2009, FWS has listed new species under the ESA, and issued new critical habitat designations that include the Colville, that may be affected by the Decision and 2020 use maps.

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76. If the Forest Service consults or reinitiates consultation, the Forest Service must not make irreversible or irretrievable commitments of resources with respect to motorized use designations on the Colville that have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures that would avoid jeopardizing ESA-listed species or adversely modifying designated critical habitat. Allowing motorized use on the Colville in ways that cause such irreversible or irretrievable commitment of resources pending completion of a new consultation would violate ESA Section 7(d), 16 U.S.C. § 1536(d).

77. By failing to initiate, or reinitiate, and complete consultation before adopting the Decision and 2020 use maps, the Forest Service failed to ensure against jeopardy to listed species or designated critical habitat in violation of its mandatory, affirmative duty under section 7(a)(2) of the ESA. 16 U.S.C. § 1536(a)(2).

SECOND CLAIM FOR RELIEF

VIOLATION OF THE NATIONAL ENVIRONMENTAL POLICY ACT

Failure to Provide Notice and Opportunity to Comment

78. Plaintiffs hereby incorporate by reference the allegations in all preceding paragraphs.

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79. The Forest Service must provide advance notice to allow for public comment, consistent with agency procedures under NEPA, on proposed vehicle use designations and revisions. 36 C.F.R. §§ 212.52, 212.54.

80. The Forest Service's NEPA regulations also require scoping in accordance with the requirements of 40 C.F.R. § 1501.7 for all proposed Forest Service actions, including those that may appear to be categorically excluded from further NEPA analysis and documentation in an EA or EIS. 36 C.F.R. § 220.4(e). Scoping requires "an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action." 40 C.F.R. § 1501.7. Agencies shall "[p]rovide public notice of NEPA-related hearings, public meetings, and the availability of environmental documents so as to inform those persons and agencies who may be interested or affected." 40 C.F.R. § 1506.6(b).

81. Defendants failed to provide sufficient advance public notice or a sufficient opportunity for the public to comment before finalizing its Decision and publishing the 2020 use maps.

82. The Forest Service's failure to provide sufficient public notice and opportunity for comment before finalizing its Decision and publishing the 2020 use maps violated NEPA. 42 U.S.C. § 4332(2)(C); 40 C.F.R. Part 1500 *et seq*.

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83. The Decision and 2020 use maps are therefore arbitrary, capricious, and not in accordance with law and should be set aside pursuant to the APA. 5 U.S.C. § 706(2).

THIRD CLAIM FOR RELIEF

VIOLATION OF THE NATIONAL ENVIRONMENTAL POLICY ACT

Failure to Conduct a NEPA Review

84. Plaintiffs hereby incorporate by reference the allegations presented in all preceding paragraphs.

85. The designation of a road, trail, or area for motorized travel is a project-level decision that requires site-specific analysis under NEPA.

86. The Decision and the 2020 use maps constitute "proposed action[s]" subject to the NEPA requirements. 36 C.F.R. § 220.4(a).

87. Before September of 2019, Defendants had a goal to make new vehicle class designations on certain roads within the Colville National Forest. Between April and September of 2019, Defendants were preparing to make a decision on the proposed designations challenged herein. The effects of the new vehicle class designations could have been meaningfully evaluated at that time. The decision to designate roads for new vehicle classes on the Colville National Forest is subject to Defendants' control and responsibility. The Decision and 2020

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use maps will result in numerous impacts on the environment that may be significant and that trigger NEPA.

88. The Decision and the 2020 use maps are not statutorily exempt from the requirements of section 102(2)(C) of NEPA. 36 C.F.R. § 220.4(a). The Decision and 2020 use maps are not categorically excluded from NEPA review.

89. Defendants failed to complete the site-specific analysis required by NEPA for the Decision and 2020 use maps.

90. Defendants' failure to review the Decision and the 2020 use maps pursuant to NEPA, including the failure to take a hard look at the environmental impacts of or reasonable alternatives to its decision, violates NEPA. 42 U.S.C. § 4332(2)(C); 40 C.F.R. Part 1500 *et seq*.

91. The Decision and 2020 use maps are therefore arbitrary, capricious, and not in accordance with law and should be set aside pursuant to the APA. 5 U.S.C. § 706(2).

FOURTH CLAIM FOR RELIEF

VIOLATIONS OF THE TRAVEL MANAGEMENT RULE

92. Plaintiffs reallege and incorporate by reference all allegations presented in the preceding paragraphs.

93. All motorized use designations, including revisions of classes of vehicles that may use a particular road, must be made consistent with the

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requirements for public involvement and the criteria for the designation of motorized use. 36 C.F.R. §§ 212.51(a), 212.52, 212.54, 212.55.

94. The Forest Service violated the Travel Management Rule by failing to provide notice and comment consistent with NEPA, including the requirements for scoping, before designating roads for new vehicle classes in its Decision and before publishing the 2020 use maps.

95. In designating National Forest System roads, the Travel Management Rule requires the Forest Service to consider effects on general criteria. 36 C.F.R. § 212.55(a).

96. The Forest Service violated the Travel Management Rule by failing to sufficiently consider how the new vehicle class designations in the Decision and published on the 2020 use maps affect National Forest System natural and cultural resources, public safety, provision of recreational opportunities, access needs, conflicts among uses, the need for maintenance and administration, and availability of resources for that maintenance and administration.

97. In addition to the general criteria, in designating vehicle use classes for National Forest System roads, the Travel Management Rule requires the Forest Service to consider specific criteria. 36 C.F.R. § 212.55(c).

98. The Forest Service violated the Travel Management Rule by failing to consider the specific criteria of speed, volume, composition, and distribution of

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traffic on roads, and compatibility of vehicle class with road geometry and road surfacing, before finalizing the Decision and publishing the 2020 use maps.

99. Because they violate the Travel Management Rule, the Forest Service's Decision and 2020 use maps are arbitrary, capricious, an abuse of discretion, contrary to law, and issued without observance of procedure required by law, and so should be set aside pursuant to the APA. 5 U.S.C. § 706(2).

VII. REQUEST FOR RELIEF.

THEREFORE, Plaintiffs respectfully request that this Court:

A. Declare that the Forest Service's Decision and 2020 use maps violate the ESA, NEPA, the Travel Management Rule, and the APA;

B. Set aside and vacate the Decision and 2020 use maps;

C. Reinstate and order compliance with former motorized use designations and use maps;

D. Award Plaintiffs temporary, preliminary, and permanent injunctive relief prohibiting the Forest Service from implementing the Decision and 2020 use maps pending compliance with governing law;

E. Award Plaintiffs their reasonable fees, costs, and expenses, including attorneys' fees, associated with this litigation; and

F. Grant Plaintiffs such further and additional relief as the Court may deem just and proper.

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Respectfully submitted this 7th day of December, 2020.

KAMPMEIER & KNUTSEN PLLC

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Attorneys for Plaintiff WildEarth Guardians

Exhibit 1

WildEarth GUARDIANS
A FORCE FOR NATURE

September 14, 2020

Via Email and Certified Mail

Secretary David Bernhardt
U.S. Department of the Interior
1849 C Street NW
Washington, D.C. 20240
exsec@ios.doi.gov

Forest Supervisor Rodney Smoldon
Colville National Forest
765 South Main Street
Colville, Washington 99114
rodney.smoldon@usda.gov

Chief Vicki Christiansen
U.S. Forest Service
1400 Independence Ave., SW
Washington, D.C. 20250
vcchristiansen@fs.fed.us

Re: Sixty-Day Notice of Intent to Sue the U.S. Forest Service for Violating Section 7 of the Endangered Species Act Regarding the Agency's Modifications to the Vehicle Class Designations and Motor Vehicle Use Maps for the Colville National Forest.

Dear Secretary Bernhardt, Chief Christiansen, and Supervisor Smoldon:

In accordance with the sixty-day notice requirement of the Endangered Species Act ("ESA"), 16 U.S.C. § 1540(g), you are hereby notified that WildEarth Guardians and Conservation Northwest intend to bring a civil action against the U.S. Forest Service and the officers and supervisors to whom this letter is directed (collectively, the Forest Service) for violating Section 7 of the ESA, 16 U.S.C. § 1536, by failing to consult or failing to reinitiate consultation before deciding to modify the vehicle class designations and the motor vehicle use maps applicable to the Colville National Forest. The Forest Service also violated Section 7 of the ESA by failing to ensure that those actions are not likely to jeopardize the continued existence of species protected by the ESA, or result in the destruction or adverse modification of critical habitat designated under the ESA, before making those modifications. *See* 16 U.S.C. § 1536(a)(2). WildEarth Guardians and Conservation Northwest intend to sue the Forest Service after the 60-day period has run unless the violations described in this notice are remedied. Kampmeier & Knutsen PLLC represents WildEarth Guardians and Conservation Northwest in this matter and any response to this notice of intent to sue should be directed to us at the addresses listed below.

The name and address of the organizations giving this Notice of Intent to Sue are:

WildEarth Guardians
P.O. Box 13086

Portland, OR 97213

Conservation NW
1829 10th Avenue W, Suite B
Seattle, Washington 98119

Counsel for WildEarth Guardians:

Marla Fox
WildEarth Guardians
P.O. Box 13086
Portland, Oregon 97213
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Counsel for WildEarth Guardians and Conservation NW:

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Legal Background: Section 7 Consultation

Section 2(c) of the ESA establishes that it is "the policy of Congress that all Federal . . . agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of" the ESA. 16 U.S.C. § 1531(c)(1). The purpose of the ESA is to "provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, [and] to provide a program for the conservation of such endangered and threatened species . . . " 16 U.S.C. § 1531(b).

To implement this policy, Section 7(a)(2) of the ESA requires that each federal agency consult with the U.S. Fish and Wildlife Service ("FWS") or NOAA Fisheries (collectively, "the Services") to ensure that any action authorized, funded, or carried out by such agency is not likely to (1) jeopardize the continued existence of any threatened or endangered species or (2) result in the destruction or adverse modification of the critical habitat of such species. *See* 16 U.S.C. § 1536(a)(2).

The ESA's consultation requirement applies "to all actions in which there is discretionary Federal involvement or control." 50 C.F.R. § 402.03. Agency actions requiring consultation are broadly defined by regulation to mean "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies" and include "actions directly or indirectly causing modifications to the land, water, or air." 50 C.F.R. § 402.02.

If species listed as threatened or endangered under the ESA may be present in the area of agency action, the action agency must prepare a Biological Assessment ("BA") to determine whether a listed species may be affected by the proposed action. *See* 16 U.S.C. § 1536(c)(1); 50 C.F.R. § 402.12. If the agency determines that its proposed action "may affect" any listed species, the agency

must engage in "formal consultation" with the Services. 50 C.F.R. § 402.14; *see also Cal. ex rel. Lockyer v. U.S. Dep't of Agric.*, 575 F.3d 99, 1018 (9th Cir. 2009) ("any possible effect, whether beneficial, benign, adverse or of an undetermined character, triggers the requirement." (quoting 51 Fed. Reg. 19,926, 19,949 (June 3, 1986)).

The threshold for a "may affect" determination is very low, and ensures "actions that have any chance of affecting listed species or critical habitat—even if it is later determined that the actions are not likely to do so—require at least some consultation under the ESA." *Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1028 (9th Cir. 2012). According to the Services' Consultation handbook, the "may affect" threshold is met if "a proposed action may pose *any* effects on listed species or designated critical habitat." U.S. Fish and Wildlife Serv. & Nat'l Marine Fisheries Serv., *Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act* at xvi (1998) (emphasis in original). The regulations implementing the ESA require an examination of both the direct effects of the action as well as the indirect effects of the action, which are defined as "those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur." 50 C.F.R. § 402.02. Therefore, an agency must consult in every situation except when a proposed action will have "no effect" on a listed species or critical habitat.

If the action agency concludes in a BA that the activity is not likely to adversely affect the listed species or adversely modify its critical habitat, and the Services concur with that conclusion in a Letter of Concurrence, then the consultation is complete. 50 C.F.R. §§ 402.12, 402.14(b). If, however, the action agency determines that the activity is likely to adversely affect the listed species or its critical habitat, then the Services must complete a "biological opinion" ("BiOp") to determine whether the activity will jeopardize a species or result in destruction or adverse modification of critical habitat. *Id.* § 402.14. If the Services determine that an action will jeopardize the species or adversely modify critical habitat, they may propose reasonable and prudent alternative actions intended to avoid such results. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(g)(5).

An agency's ESA Section 7 duties do not end with the issuance of a BiOp. The action agency "cannot abrogate its responsibility to ensure that its actions will not jeopardize a listed species; its decision to rely on a FWS biological opinion must not have been arbitrary or capricious." *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990); *see also Defenders of Wildlife v. EPA*, 420 F.3d 946, 976 (9th Cir. 2005) (rev'd on other grounds).

Further, once the consultation is complete, the agencies have a duty to ensure that it remains valid. To this end, an agency must re-initiate consultation in some circumstances. 50 C.F.R. § 402.16. The ESA's implementing regulations require the Forest Service to re-initiate consultation where discretionary Federal involvement or control over the action has been retained or is authorized by law and:

> (a) If the amount or extent of taking specified in the incidental take statement is exceeded;
>
> (b) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
>
> (c) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or

(d) If a new species is listed or critical habitat designated that may be affected by the identified action.

50 C.F.R. § 402.16.

After consultation is initiated or reinitiated, ESA Section 7(d) prohibits the agency or any permittee from "mak[ing] any irreversible or irretrievable commitment of resources" toward a project that would "foreclos[e] the formulation or implementation of any reasonable and prudent alternative measures . . . " 16 U.S.C. § 1536(d). The 7(d) prohibition "is in force during the consultation process and continues until the requirements of section 7(a)(2) are satisfied." 50 C.F.R. § 402.09.

Section 7(a)(4) of the ESA requires a federal action agency to conference with the Services if the proposed action is likely to jeopardize a species proposed for listing or destroy or adversely modify proposed critical habitat. 16 U.S.C. § 1536(a)(4); 50 C.F.R. § 402.10(a); *see also* 50 C.F.R. § 402.02 (defining "[c]onference" as "a process which involves informal discussions between a Federal agency and the Service under section 7(a)(4) of the [ESA] regarding the impact of an action on proposed species or proposed critical habitat and recommendations to minimize or avoid the adverse effects."). The agencies must record any results of a conference. *Id.* at § 401.10(e) ("The conclusions reached during a conference and any recommendations shall be documented by the Service and provided to the Federal agency").

FACTUAL BACKGROUND

Colville National Forest Motor Vehicle Use Map

In 2008, the Forest Service amended the 1988 Colville Forest Plan to clarify management direction to allow motor vehicle use only on designated roads, trails, and areas as required by the 2005 Travel Management Rule, 70 Fed. Reg. 68,264 (Nov. 9, 2005) (codified at 36 C.F.R. pt. 212, 251, 261, and 295). *See* April 10, 2008, Decision Notice & Finding of No Significant Impact for Forest Plan Amendment #31 – Clarification of Forest Plan Direction Regarding Motor Vehicle Use. The Forest Service requested informal consultation based on its 2008 Biological Evaluation that determined Amendment #31 was not likely to adversely affect gray wolf, grizzly bear, Canada lynx, woodland caribou, bull trout, and designated bull trout critical habitat. On April 1, 2008, FWS concurred with the Biological Evaluation that Amendment #31 was "not likely to adversely affect" gray wolf, grizzly bear, Canada lynx, woodland caribou, bull trout, or designated bull trout critical habitat. The FWS based its concurrence on the fact that habitat conditions for bull trout would improve with restricted motor vehicle use in riparian and stream habitat, and there would not be any adverse effects to designated bull trout critical habitat. FWS noted that its concurrence was "contingent upon implementing the project as described in the" Biological Evaluation, and the "project should be re-analyzed if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in this consultation."

In 2019, the Colville National Forest issued an addendum to the 2017 motor vehicle use maps ("MVUMs") for the Colville National Forest that changed the vehicle use class designations for 26 road segments from "Roads Open to Highway Legal Vehicles" to "Roads Open to All Vehicles." *See* Attachment 1 ("Rationale and Justification for MVUM changes 2019" signed by

Forest Supervisor Rodney Smoldon); Attachment 2 (maps of changes). The new MVUM designations opened 128 miles of roads to all vehicle uses, including wheeled all-terrain vehicles ("WATVs"). On April 1, 2020 the Forest Service published new MVUMs reflecting these changed designations. *See* U.S. Forest Service, Motor Vehicle Use on the Colville National Forest (providing hyperlinks to MVUMs), available at https://www.fs.usda.gov/detail/colville/landmanagement/projects/?cid=fsbdev3_035243&fbclid=IwAR2v2NUVuDfaimYQ7qPQNBjr-_tQl0rrcO7JxQVH72N3QuJZIldlru32RRs (last accessed Sept. 4, 2020).

The new designations created loop rides, made connections to longer routes, and increased motorized vehicle access to the Colville National Forest. *See* Attachment 1. In turn, the Forest Service anticipated the new designations would create interest in the rides and connect areas of interest, recreational locations, towns, and other locations. *Id.* This would induce increased use of the roads by off-road vehicles including WATVs. *Compare* Attachment 1 (describing "interest and intent to increase the available opportunities for the use of off highway vehicles") *with* U.S. Forest Service Engineering Reports, *available at* https://www.fs.usda.gov/detailfull/colville/home/?cid=fseprd658192&width=full (last accessed Sept. 9, 2020) (analyzing the road segments prior to change in designation, many of which note average daily traffic being less than one vehicle per day).

Combined with increased popularity of riding off-road vehicles, the new designations will result in significant impacts to wildlife and its habitat on the forest. Best available science shows that motorized recreational use can harm water quality and soils, disrupt quiet landscapes, and harm wildlife and its habitat. *See, e.g.*, Attachment 3 (Switalski and Jones, 2012, Off-road vehicle best management practices for forestlands: A review of scientific literature and guidance for managers). Off-road vehicles including WATVs are designed, manufactured, and sold for off road travel. Motorized recreational use off of roads results in more direct impacts. *See, e.g.*, Attachment 4 (U.S. Forest Service, June 16, 2020 press release, Damage to South-End Meadows Slows Restoration Project on Colville National Forest) (documenting increased damage to meadows from motor vehicles operating off designated roads). Thus, in addition to the impacts from motorized recreational use of roads, the new designations and subsequent increase in use is likely to result in increased risk of illegal, off-road use and more direct impacts to wildlife and its habitat.

Species that occur on the Colville National Forest include, but are not limited to, threatened Canada lynx, threatened bull trout and its designated critical habitat, threatened grizzly bear, endangered woodland caribou and designated critical habitat, threatened yellow-billed cuckoo, as well as candidate species wolverine. These species are affected by motorized use, including WATVs, as further described below. *See also* Attachment 3. Thus, the Forest Service was required to consult over the impacts of the new vehicle class designations adopted in the 2019 addendum to the 2017 MVUMs, and published in the 2020 MVUMs, before issuing those maps. To the extent the Forest Service previously consulted over some of the designation decisions, it must reinitiate consultation because the Forest Service modified the action in a manner that causes effects to the listed species or critical habitat that was not considered in the prior consultation.

Canada Lynx

The Forest Service's decision to change the designation of certain roads on the Colville from open to highway legal vehicles only, to open to all vehicles (including WATVs), may impact Canada

lynx. In 2000, the FWS listed Canada lynx as threatened with extinction under the ESA in part of its range. 65 Fed. Reg. 16,052 (March 24, 2000). It identified the inadequacy of existing regulatory mechanisms, specifically the lack of guidance for conservation of lynx and lynx habitat in Forest Plans and Bureau of Land Management Resource Management Plans, as the primary threat to the species. *Id.* at 16,052-16,086. The FWS published a clarification of findings in 2003, determining that threatened species designation was appropriate for the lynx. 68 Fed. Reg. 40076 (July 3, 2003).

Lynx in the contiguous United States may exist as several smaller, effectively isolated populations. The primary factor driving lynx behavior and distribution is the distribution of snowshoe hare, their primary prey. Metapopulation stability depends on habitat quality and successful dispersal between isolated habitat patches. The likelihood of subpopulation persistence declines with increasing fragmentation and isolation. Maintaining habitats to provide for dispersal movements and interchange among individuals and subpopulations may be the most important provision for maintenance of population viability in the Lynx Conservation Assessment and Strategy (LCAS).[1]

The FWS's 2005 Recovery Outline for lynx identified core, secondary, and peripheral areas based on lynx occupancy, reproduction, and use, as documented by historical and current records. Six core areas, including the Kettle Range and Wedge, were identified in the lower 48 states to indicate where long-term persistence of lynx had been documented and are important for lynx recovery (*see* 2017 Biological Opinion for the Colville National Forest Plan Revision at 257):

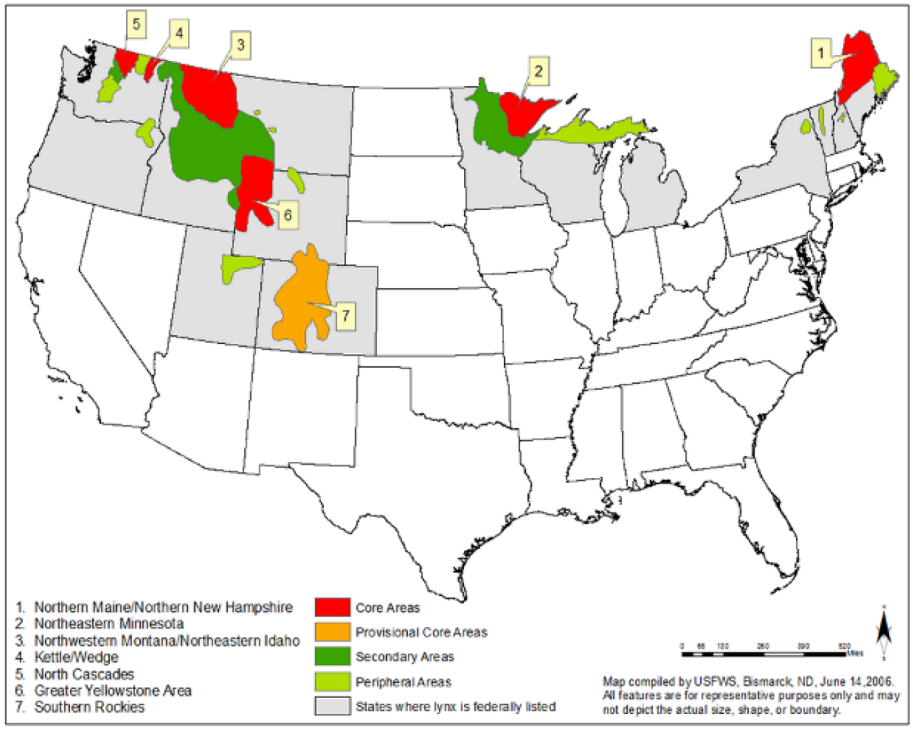

Figure 14. Areas identified as core, secondary, and peripheral as depicted in the Canada Lynx Recovery Outline (USFWS 2005; Figure 3.1 in ILBT 2013 p.37).

[1] Interagency Lynx Biology Team (ILBT), Canada lynx conservation assessment and strategy (3d ed. 2013), Forest Service Publication R1-13-19. The LCAS continues to fulfill important roles in promoting conservation of the species on federal lands like the Colville National Forest. *Id.* at 4.

Lynx have been documented in the northeastern corner of Washington state (McKelvey et al. 2000). Lynx tracks and individual lynx have been consistently observed on the Colville National Forest (Koehler et al. 2008, WDFW and USFS 2011). In the summers of 2016 and 2017, lynx were captured on remote camera while surveys were being conducted in the Kettle Range. There are 37 Lynx Analysis Units (LAUs) on the Colville, 13 of which are within the Kettle-Wedge Core Area (*see* 2017 Biological Opinion for the Colville National Forest Plan Revision at 265):

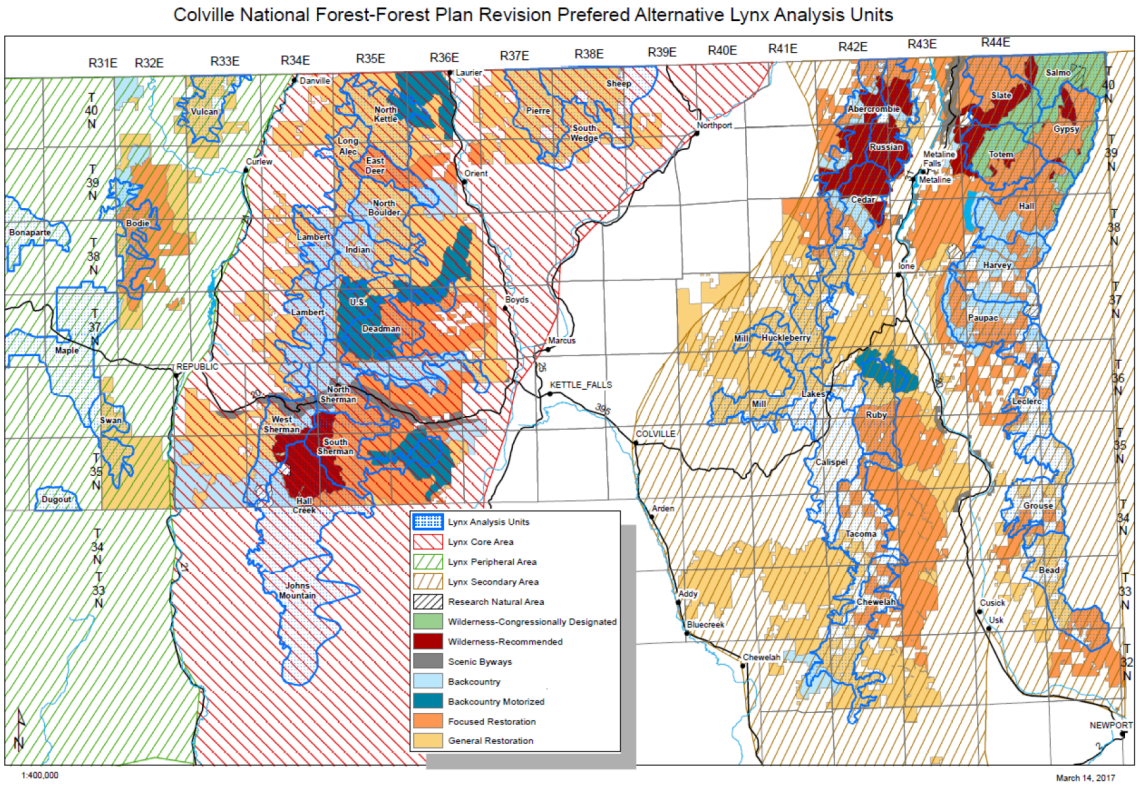

Figure 15. CNF Plan MAs and LAUs.

LAUs are meant to facilitate analysis and monitoring of the effects of management actions on lynx habitat.

The LCAS divided threats to lynx and lynx habitat into two tiers: those that have the potential to negatively affect lynx populations and habitat, and those that may affect individual lynx but are not likely to have a substantial effect on lynx populations and lynx habitat. The first tier includes climate change, vegetation management, wildland fire, and fragmentation of habitat. The second tier includes incidental trapping, recreation, minerals and energy exploration and development, illegal shooting, backcountry roads and trails, and domestic livestock grazing.

Recreational motorized use of roads may impact Canada lynx in numerous ways, including but not limited to habitat fragmentation, displacement, noise disruption, and vehicle collision. Habitat fragmentation occurs when recreational activity displaces lynx from its habitat and impair lynx movement and habitat connectivity. Because boreal forests along the southern part of lynx range are inherently patchier, any additional impact from human actions is exponentially greater.

Fragmentation can result in a reduction in snowshoe hare habitat and thus snowshoe hare densities and use by lynx (Koehler 1990a, Mowat et al. 2000. Forest roads can also become sources of lynx mortality at high traffic volumes and speeds. In addition, human access via forest roads allows for more hunting, and as a result increases the risk of incidental lynx mortality.

Bull Trout and its Critical Habitat

The Forest Service's decision to change the designation of certain roads on the Colville from open to highway legal vehicles to open to all vehicles, including WATVs, may impact bull trout and its designated critical habitat. In November 1999, all populations of bull trout within the coterminous United States were listed as a threatened species under the ESA. 64 Fed. Reg. 58910 (Nov. 1, 1999). The FWS designated critical habitat for bull trout most recently on October 18, 2010. 75 Fed. Reg. 63898 (Oct. 18, 2010). The rule designated a total of 19,729 miles of stream and 488,252 acres of reservoirs and lakes in the States of Washington, Oregon, Nevada, Idaho, and Montana as critical habitat for the bull trout. The 2015 recovery plan for bull trout identified historical habitat loss and fragmentation, interaction with nonnative species, and fish passage issues as the most significant primary threat factors affecting bull trout. *See* U.S. Fish and Wildlife Service, 2015 Recovery plan for the coterminous United States population of bull trout (*Salvelinus confluentus*), page iv. The Colville National Forest falls within two recovery units in the 2015 bull trout recovery plan: the Mid-Columbia and the Columbia Headwaters.

The Forest Service took Environmental DNA (eDNA) samples in 2015 from all streams on the Colville with bull trout critical habitat and detected bull trout in the West Branch of LeClerc Creek. Bull trout have been observed in Cedar Creek, South Fork Salmo River, Slate Creek, Sullivan Creek, Cedar Creek (Ione Creek), LeClerc Creek, Mill Creek, and Indian Creek. The eastern portion of the Colville has designated bull trout critical habitat in Unit 31, Clark Fork River Basin (*see* 75 Fed. Reg. 63,898, 64,061-64,067):

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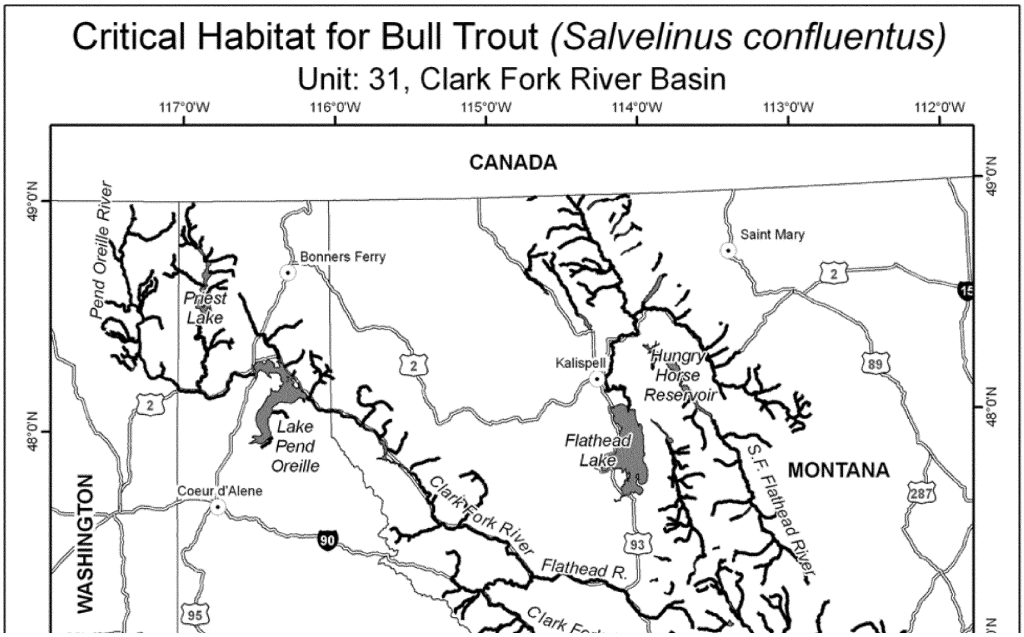


See also Attachment 5, 2017 Biological Opinion for the Colville National Forest Land and Resource Management Plan Revision, page 155 (Figure 7, map of Critical Habitat and [Management Areas] in the Pend Oreille River Watershed).

Roads often contribute to degraded baseline conditions in watersheds containing bull trout. *See, e.g.*, 2017 Biological Opinion for the Colville Forest Plan Revision at 139-140. Roads are a primary source of sediment impacts in watersheds with roads. Accumulation of fine sediment is detrimental to bull trout habitat. Lee et al. (1997) found a pattern of decreasing populations of bull trout with increasing road density. Sediment delivered to streams is greatest in riparian areas where roads cross the streams. Fords and approaches to the crossings deliver sediment directly to streams. Culverts can produce a large amount of sediment if the culvert plugs and fails. Travel management decisions affecting roads and trails are most likely to effect substrate embeddedness[2] and stream bank condition.[3] Plus roads and trails paralleling streams can interfere with large wood reaching the stream and cause increased erosion and decreased stream bank condition.

As just one example of how the Forest Service's change to vehicle class designations may impact bull trout and its designated critical habitat, the Forest Service newly designated Forest Road No. 1935000 as open to WATVs and other vehicles. Forest Road No. 1935000 runs adjacent to and crosses several times Harvey Creek, it crosses West Branch LeClerc Creek, it crosses Saucon Creek and several of its tributaries, and it crosses Middle Branch LeClerk Creek. Harvey Creek and LeClerk Creek are designated bull trout critical habitat. As another example, the Forest Service designated Forest Road No. 1200000 as open to WATVs and other vehicles and it crosses Mill Creek several times. Mill Creek is designated bull trout critical habitat and a tributary to Pend Oreille River which is also designated bull trout critical habitat. All of these streams are within watersheds identified by the Forest Service as either "Functioning at Risk" or "Not Properly Functioning" (*see* 2017 Biological Opinion for the Colville National Forest Plan Revision at 113):

[2] Which can be measured as change in total acreage open to motorized use, based on the assumption that embeddedness is related to the total area susceptible to erosion.

[3] Which can be measured as an inverse of stream crossings.

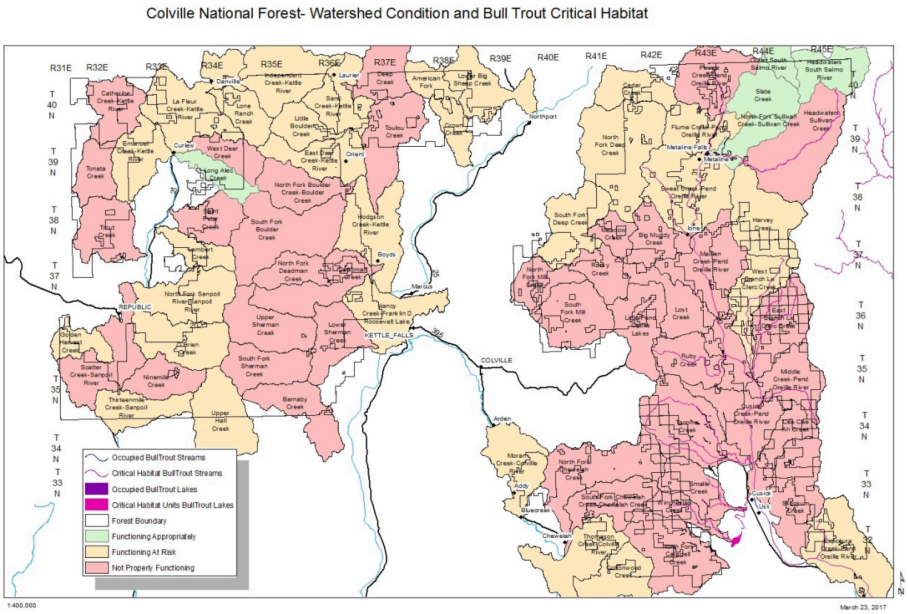


Figure 4. Functioning Condition by Watershed and Including Critical Habitat (from Figure 7 in BA, p.126).

Some of the stream segments are also identified as water quality impaired for stream temperature or dissolved oxygen (*see* 2017 Biological Opinion for the Colville National Forest Plan Revision at 123):

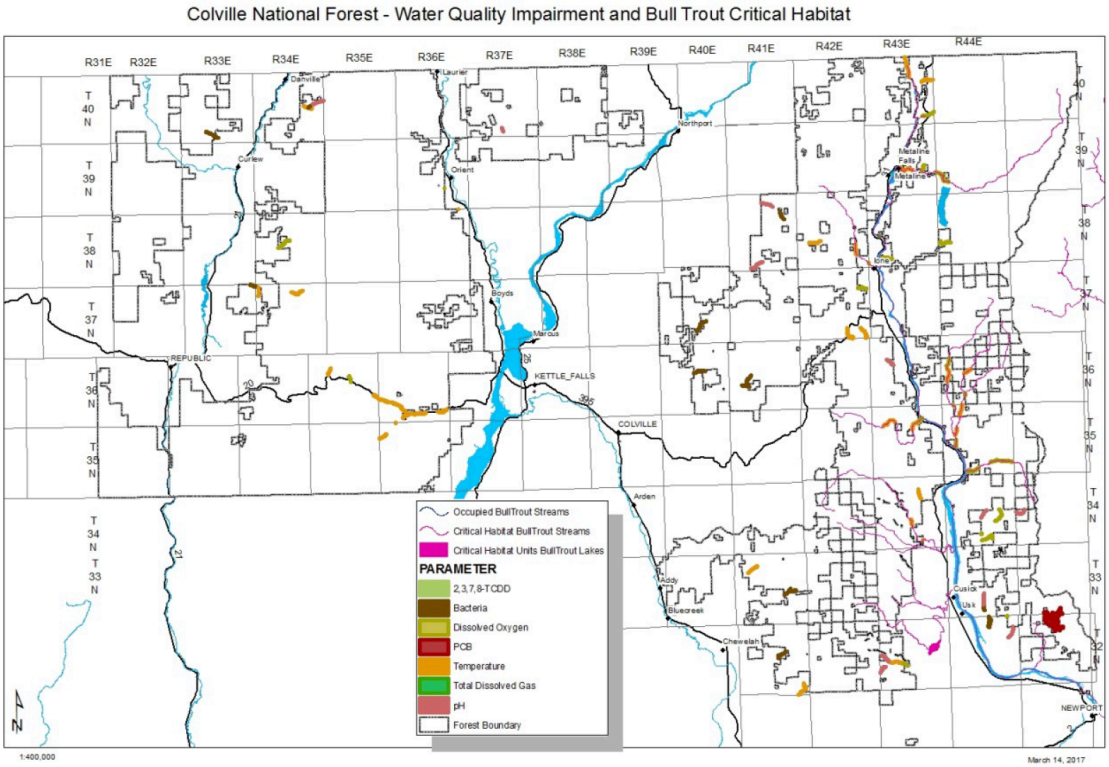


Figure 5. Water Quality Impairment and Bull Trout Critical Habitat.

The West Branch and East Branches LeClerc Creek are priority watersheds and also key watersheds. *See* 2017 Biological Opinion for the Colville National Forest Plan Revision at 134. Key watersheds are the priority for restoration. *Id.* (emphasis in original). Priority watersheds are used to target implementation of short-term, opportunistic restoration work. *Id.* The new MVUM designations may affect these streams and the creatures that live there, including bull trout. Accordingly, the FS should have consulted under the ESA to evaluate how opening new roads to WATV use may affect bull trout and other species.

Grizzly Bears

The Forest Service's decision to change the designation of certain roads on the Colville from open to highway legal vehicles only, to open to all vehicles (including WATVs), may impact grizzly bears. In 1975 the FWS listed all grizzly bears in the contiguous United States as a threatened species under the ESA. 40 Fed. Reg. 31,734 (July 28, 1975). In the 1975 listing, FWS determined grizzly bears in the contiguous United States were threatened by a combination of factors. The primary factors establishing the need to list grizzly bear were: (1) present or threatened destruction, modification, or curtailment of habitat or range; (2) overutilization for commercial, sporting, scientific, or educational purposes; and (3) other manmade factors affecting its continued existence.

In the 1993 Grizzly Bear Recovery Plan, the FWS identified six recovery areas grizzly bears are known to have inhabited and where suitable habitat available for grizzly bear conservation remains, including: (1) the Northern Continental Divide Ecosystem (NCDE); (2) the Greater Yellowstone Ecosystem; (3) the Cabinet-Yaak Ecosystem; (4) the Selkirk Mountains Ecosystem; (5) the Bitterroot Ecosystem; and (6) the North Cascades Ecosystem. *See* U.S. Fish and Wildlife Service, 1993 Grizzly Bear Recovery Plan. The Selkirk Ecosystem Recovery Zone includes approximately 2,200 square miles of northeastern Washington, northern Idaho, and southern British Columbia, Canada. The grizzly bear population in the Selkirk Ecosystem Recovery Area is estimated at approximately 80 grizzly bears.

The Selkirk Ecosystem Recovery Area has three grizzly bear management units ("GBMU") within the Colville National Forest: LeClerc, Salmo-Priest, and Sullivan-Hughes. *See* Attachment 6, 2017 Biological Opinion for the Colville Forest Plan Revision at 233 (Figure 12, map of Management Areas, GBMUs, and Core Areas). Threats to grizzly bears in the Selkirk Ecosystem include motorized access, human-caused mortality, small population size, and population fragmentation that resulted in genetic isolation. *Id.* at 228. Forest roads overlap with the three GBMUs on the Colville National Forest (2017 Biological Opinion for the Colville Forest Plan Revision at 241):

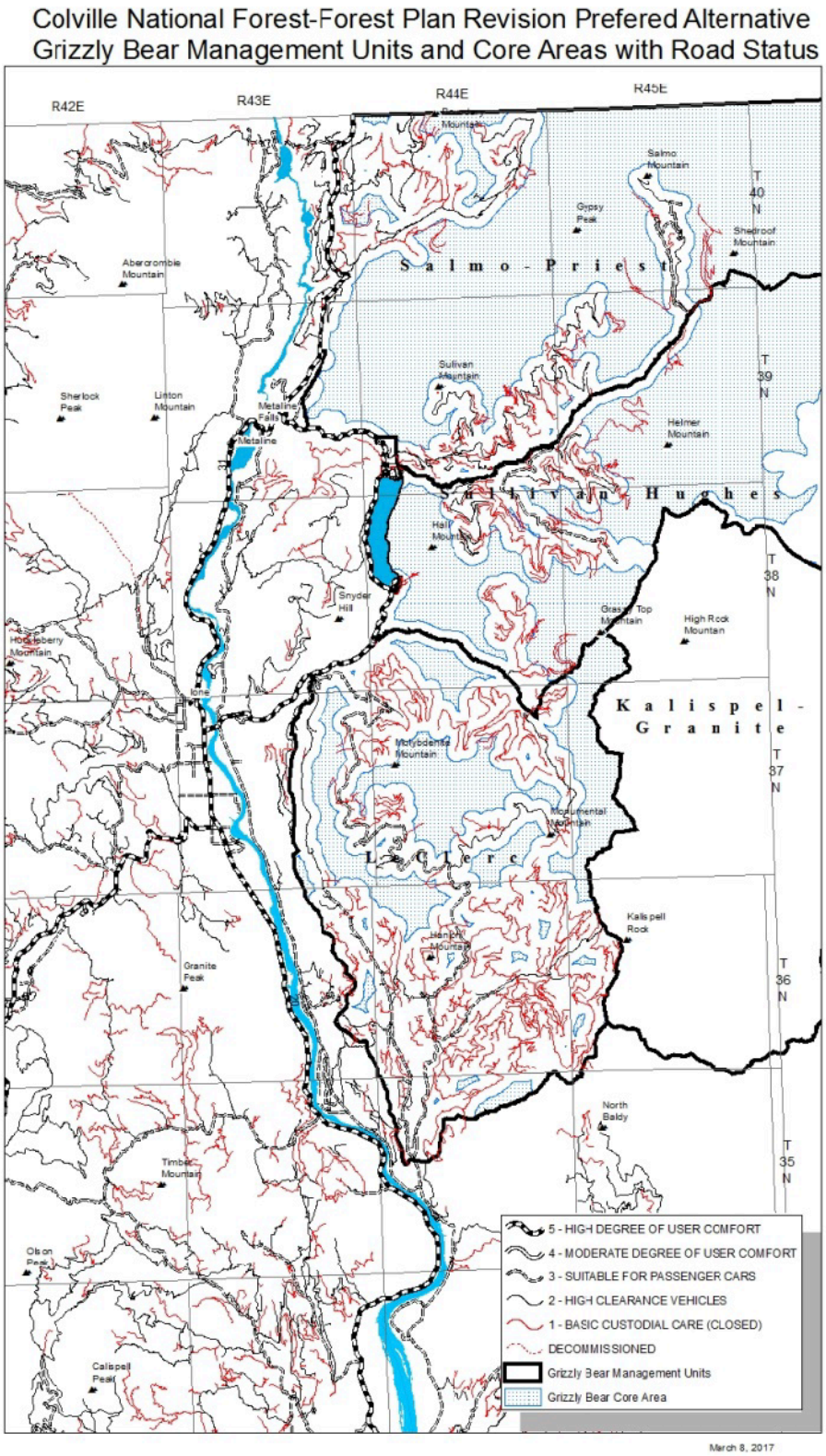


Figure 13. CNF Plan GBMUs and Roads

The FWS considers the management of roads to be one of the most important variables in managing grizzly bear habitat. Best available science makes clear that the presence of roads can have negative effects on natural systems and wildlife populations, including grizzly bears. *See* Proctor, et al. (2020). Harmful impacts to grizzly bears from roads include (1) increased human-caused mortality, (2) habitat displacement, (3) habitat fragmentation, and (4) direct habitat loss. *Id.* Grizzly bears are adversely impacted by roads through direct mortality from vehicle strikes and illegal harvest, and indirect mortality resulting from habituation to humans. Grizzly bears are also adversely impacted by roads through avoidance of key habitat as they attempt to move away from roads and road activity; through displacement from key habitat as they attempt to move away from roads and road activity; and through modification and fragmentation of their core habitat due to roads and road construction. The presence of roads to human population centers and the presence of dispersed motorized recreation in habitat around roads poses risks to grizzly bears. Human activities can displace grizzly bears from seasonal habitats, especially in riparian areas and wet meadows where recreation and grizzly bears may overlap seasonally. *See* 2017 Biological Opinion for the Colville Forest Plan Revision at 243. Access management is essential to reducing mortality risk to grizzly bears. Roads may cause some grizzly bears to habituate to humans. Grizzly bears that are habituated to humans suffer increased mortality risk.

Many grizzly bears will under-use or avoid otherwise preferred habitats that are frequented by humans due to road proximity and related opportunities for human access. This represents a modification of normal grizzly bear behavior that can result in detrimental effects. Grizzly bears will avoid roads and corridors adjacent to roads. Grizzly bears will also avoid roads and adjacent corridors even when the area contains preferred habitat for breeding, feeding, shelter, and reproduction.

Mace and Manley (1993) reported use of habitat by all sex and age classes of grizzly bears was less than expected where total road densities exceeded two miles per square mile. Mace and Manley (1993) also found that adult grizzly bears used habitats less than expected when open motorized route density exceeded one mile per square mile. Female grizzly bears in the Mace and Manley (1993) study area tended to use habitat more than 0.5 mile from roads or trails greater than expected. Large blocks of grizzly bear habitat free from human influence are vital to grizzly bears. Managing public motorized access to grizzly bear habitat is one of the most common and effective ways to maintain a level of separation between grizzly bears and humans. *See* 2017 Biological Opinion for the Colville Forest Plan Revision at 232. These landscapes allow the species to exist under natural, free-ranging conditions. Roads are the primary threat to these large blocks of grizzly bear habitat. Roads are a primary threat because they facilitate human presence and because they fragment large swaths of habitat into smaller blocks. The new MVUM designations may affect grizzly bears. Accordingly, the FS should have consulted under the ESA to evaluate how opening new roads to WATV use may affect that species.

<u>Woodland Caribou</u>

The Forest Service's decision to change the designation of certain roads on the Colville from open to highway legal vehicles only, to open to all vehicles (including WATVs), may impact woodland caribou. The FWS listed the southern Selkirk subpopulation of woodland caribou as endangered under the ESA in 1984. 49 Fed. Reg. 7,390 (Feb. 29 1984). In 2012, FWS designated approximately 30,010 acres as woodland caribou critical habitat. 77 Fed. Reg. 71042 (Nov. 28, 2012). In 2019, FWS amended the listing of the southern Selkirk population of woodland caribou by

defining the southern mountain caribou distinct population segment ("DPS"). 84 Fed. Reg. 52,598 (Oct. 2, 2019). The southern Selkirk subpopulation of woodland caribou occurs in the southern Selkirk Mountains of southeastern British Columbia, northeastern Washington (in Pend Oreille County), and northern Idaho, and is the only caribou herd that ranges into the contiguous U.S. *See* Wiles, G. J. 2017, Periodic status review for the woodland caribou in Washington, Washington Department of Fish and Wildlife, Olympia, WA. *See also* Attachment 7, 2017 Biological Opinion for the Colville Forest Plan Revision at 184 (Figure 10, map of Caribou Critical Habitat and Winter Recreation).

The range of the southern mountain caribou DPS in British Columbia, Canada, and the United States has declined by 60 percent since historical arrival of Europeans in British Columbia. 84 Fed. Reg. at 52,599. Threats to the southern mountain caribou DPS include small, declining, and isolated subpopulations; recent extirpation of two subpopulations; recent modeling predicting further declines and extirpation of subpopulations; and continuing and escalating threats. *Id.* at 52,611. Threats to caribou habitat within the southern mountain DPS include forest harvest, human development, recreation, and climate change. *Id.* at 52,612. The 1994 recovery plan for woodland caribou included an objective to establish a herd in the western portion of the Selkirk Mountains in Washington. *See* U.S. Fish and Wildlife Service 1994, Recovery Plan: Selkirk Mountain Woodland Caribou.

Roads, and motorized use of roads, may disrupt woodland caribou and fragment woodland caribou habitat. 84 Fed. Reg. at 52,613; U.S. Fish and Wildlife Service, 2019, Recovery outline for the southern mountain caribou distinct population segment of woodland caribou, page 7. Increased road systems have generated more human activity and human disturbance in habitat that was previously less accessible to humans. *See* 2017 Biological Opinion for Colville Forest Plan Revision at 171. Human development and its associated infrastructure can eliminate caribou habitat, alters the distribution and abundance of other ungulate species, provides travel corridors for predators, and increases human access to habitat that was previously difficult to access. *Id.* at 175. Roads and motorized access can result in poaching and accidental kills by hunters; accidental kills by vehicles; habitat fragmentation; increased predation of caribou; and disturbance to caribou during the critical winter period. *See* 2017 Biological Opinion for Colville Forest Plan Revision at 193. The new MVUM designations may affect woodland caribou. Accordingly, the FS should have consulted under the ESA to evaluate how opening new roads to WATV use may affect that species.

<u>Western Yellow-billed Cuckoo</u>

The Forest Service's decision to change the designation of certain roads on the Colville from open to highway legal vehicles only, to open to all vehicles (including WATVs), may impact the Western DPS yellow-billed cuckoo. The Western DPS of the yellow-billed cuckoo was listed as threated under the ESA in 2014. 79 Fed. Reg. 59992 (Oct. 3, 2014). There is currently no recovery plan for the Western yellow-billed cuckoo. The Western DPS yellow-billed cuckoo occurs across the Western United States, including Washington (78 Fed. Reg. 61,621, 61,631 (Oct. 3, 2013)):

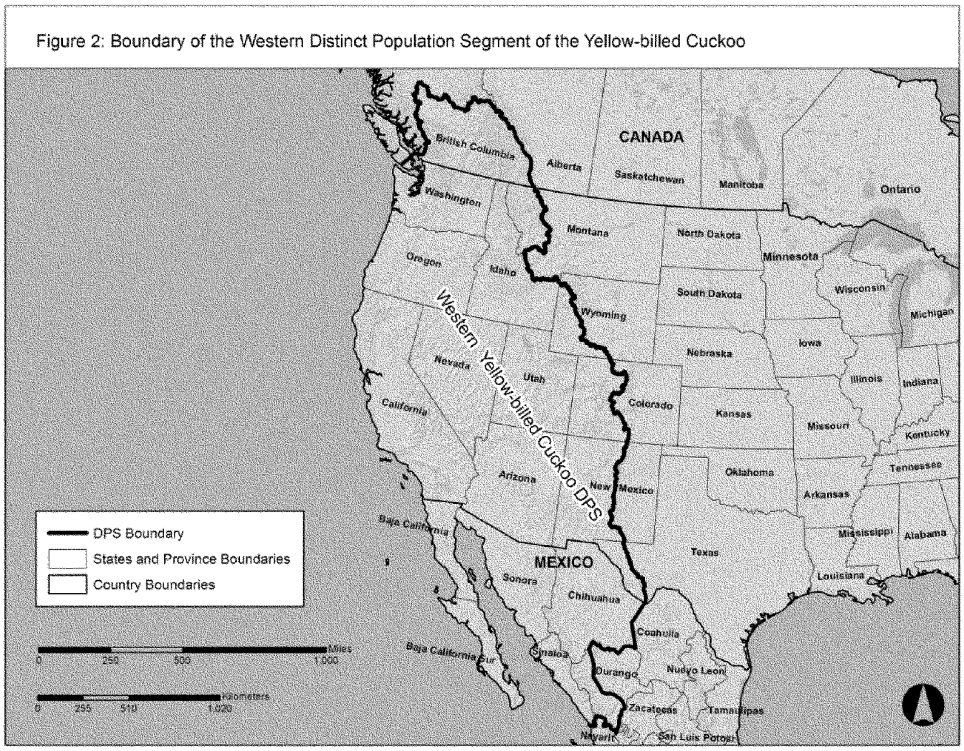


Figure 2. Western Yellow-billed Cuckoo distinct population segment boundary.

The Western yellow-billed cuckoo nests almost exclusively in low to moderate elevation multi-layered riparian woodlands that are 50 acres or larger. 78 Fed. Reg. 61,621 (Oct. 3, 2013). The greatest factor leading to the decline of the bird has been loss of habitat in its breeding range. *See* 2017 Biological Opinion for Colville Forest Plan Revision at 286. Forest activities that directly influence the quality and availability of habitat for the riparian-dependent yellow-billed cuckoo include management of forest roads, recreation sites, and vegetation treatments that occur within riparian habitats. *Id.* at 289. Altered hydrology of riverine systems from channelization by disturbance from activities associated with road use and recreation, construction, and maintenance impact the habitat by making systems less dynamic. *Id.* at 297. These activities can reduce effectiveness and connectivity of riparian habitat, disturb sensitive soils, and increase sediment delivery to streams. *Id.*

The Western DPS yellow-billed cuckoo are extremely rare in Washington. Between 1950 and 2000 there were 12 observations, 8 of which occurred in eastern Washington near the Cascades. In 2012 a bird was observed on the Little Pend Oreille National Wildlife Refuge, and in 2015 a bird was observed near Mazama, Washington. There are no known breeding Western yellow-billed cuckoo on the Colville, but there is potential habitat (*see* 2017 Biological Opinion for Colville Forest Plan Revision at 288-89):

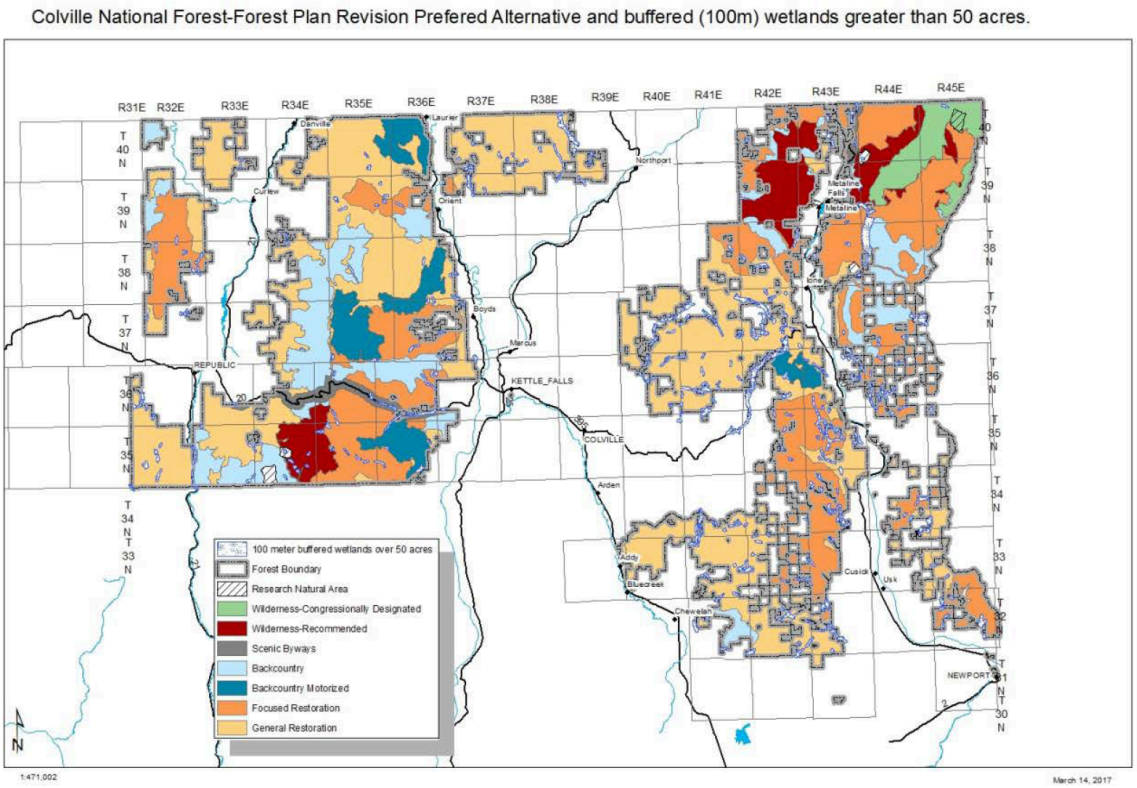


Figure 16. CNF Riparian areas greater than 50 acres in size.

The new MVUM designations may affect the western yellow-billed cuckoo. Accordingly, the FS should have consulted under the ESA to evaluate how opening new roads to WATV use may affect that species.

<u>Wolverine</u>

The Forest Service's decision to change the designation of certain roads on the Colville from open to highway legal vehicles only, to open to all vehicles (including WATVs), may impact wolverine. In 2013 the FWS proposed to list the distinct population segment of the North American wolverine as threatened under the ESA. 78 Fed. Reg. 7864 (Feb. 4, 2013). After a district court vacated the FWS's 2014 withdrawal of its proposal, in 2016 the FWS reopened the public comment period on its proposal to list the distinct population segment of wolverine occurring in the contiguous United States as threatened under the ESA. 81 Fed. Reg. 71670 (Oct. 18, 2016). Factors affecting the wolverine's continued existence include projected decrease and fragmentation of wolverine habitat and range due to climate change, trapping, lack of regulatory mechanisms to address the threats to wolverine habitat from climate change, and loss of genetic diversity due to small population size. Trapping has been the primary cause of wolverine mortality (Banci 1994, Krebs et al. 2004, Lofroth and Ott 2007, Squires et al. 2007).

Wolverines occur on the Colville National Forest (*see* 2017 Biological Opinion for Colville Forest Plan Revision at 316):

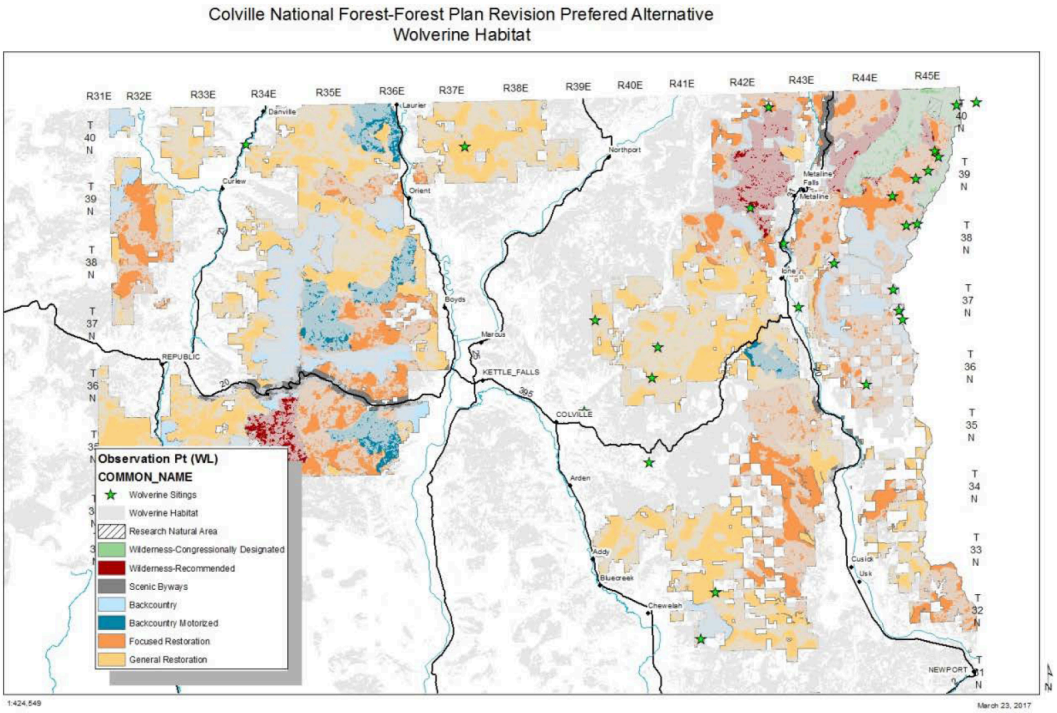


Figure 17. Potential Wolverine Habitat and Wolverine Observation Points. (Dates for the sightings were not available).

Roads – especially increased use of backcountry roads – may negatively impact wolverine. Krebs et al. (2007) found that female wolverine habitat use was negatively associated with roaded areas. May et al. (2006) found that wolverine natal dens were located away from roads and that this had a positive influence on successful reproduction. By providing increased access into the forest, roads may also increase the risk of incidental wolverine mortality due to increased trapping for other wildlife. The new MVUM designations may affect wolverine. Accordingly, the FS should have conferred under the ESA to evaluate how opening new roads to WATV use may affect that species.

ESA VIOLATIONS

The Forest Service violated Section 7 of the ESA, 16 U.S.C. § 1536, by failing to initiate and complete consultation, or to reinitiate and complete consultation, on the modifications to the vehicle use class designations and motor vehicle use maps for the Colville National Forest made in 2019 and 2020. Section 7(a)(2) of the ESA requires that each federal agency consult with the Services to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of the critical habitat of such species. *See* 16 U.S.C. § 1536(a)(2).

Here, the modifications to the vehicle use class designations and motor vehicle use maps for the Colville National Forest made in 2019 and 2020 authorize new vehicle uses and will induce increased vehicle traffic on approximately 128 miles of roads in the Colville National Forest. By authorizing new vehicle traffic on those roads, the Colville National Forest has authorized and caused increased vehicle traffic on those and other roads in the forest. These Forest Service authorizations may affect ESA listed species that inhabit and use the Colville National Forest, including but not limited to: threatened Canada lynx, threatened bull trout and its designated critical

habitat, threatened grizzly bear, endangered woodland caribou, threatened yellow-billed cuckoo, as well as candidate species wolverine. The Forest Service's failure to initiate and complete consultation, or to reinitiate and complete consultation, on these actions violates the procedural consultation and conferral requirements of ESA section 7. It also violates the substantive requirements of that section by failing to ensure that the Forest Service's actions do not jeopardize any species protected by the ESA or adversely modify any critical habitat designated under the ESA. These violations are significant violations of the ESA.

Additionally, the Forest Service violated Section 7(d) of the ESA by adopting and implementing modifications to the vehicle use class designations and motor vehicle use maps for the Colville National Forest in 2019 and 2020 before completing adequate and lawful consultation. Such actions constitute an "irreversible and irretrievable commitment of resources" and warrant an injunction. *See* 16 U.S.C. §1536(d).

At the conclusion of the 60-day notice period initiated by this letter, WildEarth Guardians and Conservation Northwest intend to file a lawsuit against the U.S. Forest Service, the individuals named above, and the individuals that administer components of that agency, under the citizen suit provisions of the Endangered Species Act, 16 U.S.C. § 1540. WildEarth Guardians and Conservation Northwest will seek declaratory and injunctive relief to prevent further ESA violations and such other relief as is permitted by law, including recovery of plaintiff's costs, attorneys' fees, and expert witness fees.

Sincerely,

Kampmeier & Knutsen, PLLC

By: _____
Paul A. Kampmeier

WildEarth Guardians

By: _____
Marla Fox

cc: Barry Thom, Regional Administrator, NOAA Fisheries, West Coast Region, 1201 Northeast Lloyd Boulevard, Suite 1100, Portland, Oregon 97232

State Supervisor Brad Thompson, Washington Fish and Wildlife Office, U.S. Fish and Wildlife Service, 510 Desmond Drive SE, Suite 102, Lacey, Washington 98503

William Barr, U.S. Attorney General

Rationale and Justification for MVUM changes 2019

A. Need for Change (36 CFR part 212.54: Designations of National Forest System roads may be revised as needed to meet changing conditions.)
   a. Disconnected routes: while there are more than 700 miles of routes on the Colville National Forest, many of them are less than 5 miles, and only a small percentage of them create loop rides or make connections to longer routes.
   b. Public interest: there is much local interest from individual users, motorized user groups, and state and local government to create a system of motorized routes that are authorized for all vehicles that create loops of a size to create interest in the rides and that connect areas of interest like overlooks, recreational locations, towns and other locations. There is obvious interest and intent to increase the available opportunities for the use of off highway vehicles in the state of Washington as evidence by the passage of the law creating WATV's and allowing their use on public roads in the state.
   c. Local elected official's interest: Based on input from county governments in Ferry, Stevens and Pend Oreille County, the boards of county commissioners support a more common sense, and complete set of routes for motorized recreation. Through discussions and comments to the forest it is clear that the desire of county government is to examine the routes available today, and make changes as necessary to offer opportunities for loops, connectors, and longer rides.
B. Specifics of the proposal
   a. Proposed Routes (see maps provided by TCMRA)
      i. The routes in this proposal were identified by the Tri-County Motorized Recreation Association, a local user group, and have been discussed at length with the Forest. All routes proposed include the following:
         1. Modification will be to the class of vehicle authorized only, and will occur on existing open roads.
         2. All closures and restrictions will continue unchanged (including exclusion of cross country travel, no public use on closed roads, and any seasonal closures)
   b. Public participation (36 CFR part 212.52): In accordance with 36 CFR part 212.52 the public shall be allowed to participate in the designation of roads, trails and lands and the revision of those designations. Further, advanced notice shall be given to allow for public comment on proposed designations and revisions. This issue has been raised at many meetings with the Tri-county Forest Group. These meetings are open to the public and all are invited to provide feedback or comments. During monthly meetings over a period of 6 months the Tri-county Forest Group invited comment and discussion of this proposal. Their meetings attempted to integrate various user and stakeholder groups in an attempt to come to consensus on the routes. The participants included conservation groups, non-motorized users, equestrian users, industry representatives, motorized users, local elected officials, and more. While there was never a consensus or complete agreement on the proposal, there was opportunity to hear various thoughts, concerns and opinions by the agency. Tri-county meetings are consistently attended by District Rangers and other forest staff. Other opportunities to comment directly to the forest have been provided beginning in June of 2019. These opportunities are continuous,

based on information on the forest's public facing website, and the public was invited to participate through notification on the Forest's social media page. Aside from the verbal discussions with interested parties, and at the Tri-county meetings, we've received 7 unique comments.

i. I believe that the specific opportunity for public comment over the last two months and the discussion in the community and Tri-county group over the last 18 months provided the agency enough information to adequately address and consider potential effects or concerns. Coupled with the level of expected effects and the changes being proposed, I feel that there has been sufficient opportunity to adequately consider potential effects to the human environment.

ii. The Tri-county group is not intended to be a decision making body, and the input received from the members and attendees was used for consideration only. This, with the posting of information, and further opportunity to comment, allowed the Forest to evaluate and consider the potential for meaningfully evaluated effects to the environment.

c. Comment Summary: below is a summary of the types of comments received during our process

i. Some felt that just engaging with the Tri-County Forest Group wasn't adequate.

ii. Some felt that this process was required to undergo analysis under NEPA. We assume this means documentation in a DN/FONSI or ROD.

iii. Some commenters felt that this would increase the use of forest roads and lead to an increase in off-road travel.

iv. There were concerns about major impacts to the environment

v. There were many comments that were supportive of the proposal

C. Consideration of 36 CFR part 212

a. Part 212.53: Coordinate with other government agencies

i. Federal

1. Border Patrol: we discussed this proposal with border patrol in the spring of 2019. The response from the patrol agents in charge of three field offices was that changing the class of vehicles on open existing roads would have no effect to their activities or mission

ii. Local

1. Ferry, Stevens and Pend Oreille County: support the increased use of motorized vehicles as opportunities for recreational access. This has been clear through discussions in the Tri-County Forest Group

iii. Tribal

1. The Three Rivers District Ranger and the Forest Heritage Program Manager met with the THPO's of the Colville, Spokane, and Kalispel Tribes during the summer of 2018 and discussed this proposal. These meetings were followed by letters to the Tribal Chair of each further describing our intent. No response from the tribes was received.

b. Natural Resources

i. Since this is only a change in the designation of vehicle class on existing open roads there is no expected measurable or meaningful effects to natural resources. The effects of the existing transportation system would remain unchanged from the current condition. This includes soils, botany, timber, cultural resources, aquatics, wildlife and fuels.

ii. Engineering was asked about potential increase in road use, or increase in maintenance needs and found that neither were likely to occur.

c. Public Safety

i. Mixed use analysis was completed on each of the recommended route segments. This analysis evaluated the probability and severity of accidents along each specific segment. All routes were identified as Moderate or Low risk routes.

d. Conflicts among uses

1. Location of the routes have been focused to attempt to limit conflict in areas of high non-motorized uses, and to avoid detrimental effects to other recreational opportunities
2. The changes only affect the designated class of vehicle allowed on the roads, so there will be no expansion on access by motor vehicles.

Decision: Based on my review of the comments received, input from Forest Service specialists, and a review of the regulations associated with this proposal, I am making the following two decisions:

1. This proposal will not cause effects that can be meaningfully evaluated on the environment or the relationship of people to that environment. Off-road travel is not authorized on the Colville National Forest. The potential for illegal off road use exists whether the roads are open to mixed use or not, and there is no realistic way to predict where illegal use may occur or to meaningfully evaluate the context or intensity of this use. Forest Service Law Enforcement, forest recreation crews, forest damage response crews and the CNF ambassador program continue to enforce restrictions and educate users and we expect this to continue. Education that focuses on legal uses is our best tool to curb illegal off road use, and over the past few years we have seen declines in un-authorized use.
2. After careful consideration of the factors relevant to this decision, I've decided to modify the designated class of vehicles on the routes proposed. This decision will change the existing designation from use by highway legal vehicles only, to a designation of open to all vehicles. This decision affects only those routes as proposed in this process.

Rodney D. Smoldon

Rodney D. Smoldon
Forest Supervisor

ESA Notice Letter Attachment 2

Maps of the Forest Service Designations of Roads as Open to All Vehicles
Includes Figures A through I

U.S. Forest Service, "2018-2019 MVUM Addendum Decal (updates older maps to 2020 version)," hyperlink to spreadsheet available at: https://www.fs.usda.gov/detail/colville/home/?cid=FSBDEV3_035243 (last accessed Sept. 4, 2020). The following statement and table are taken directly from the Forest Service's own spreadsheet:

"As of 08/06/2019, the designations on the following roads are changed from Roads Open to Highway Legal Vehicles to Roads Open to All Vehicles:"

Road No.	B.M.P.	E.M.P.	MAP
1200000	0	10.32	NE
1934000	0	4.6	NE
1935000	25.02	26.44	NE
2113000	0	10.145	NW1
2148000	0	14.171	NW1
2149000	0	7.358	NW1
2150000	0	7.248	NW1
5300000	0	7.732	SW
5300500	0	1.365	SW
5320000	0	15.155	SW
5330000	0	8.9	SW
9565000	0	5.107	SW
9565080	0	4.514	SW
9565260	0.59	1.106	SW
9565270	0	0.3	SW
9565520	0	2.46	SW
9565800	0	9.567	SW
9565820	0	0.029	SW
9565822	0	0.793	SW
9565840	0	0.683	SW
9576150	0	7.3	NW1
9576160	0	1.673	NW1
9576200	0	1.705	NW1
9576215	0	2.2	NW1
9576218	0	1.178	NW1
9576220	0	1.3	NW1

Figure A. Map of the Colville National Forest, with vicinity of the areas with new road designations identified in the table above outlined in red. Figures B through X show details.

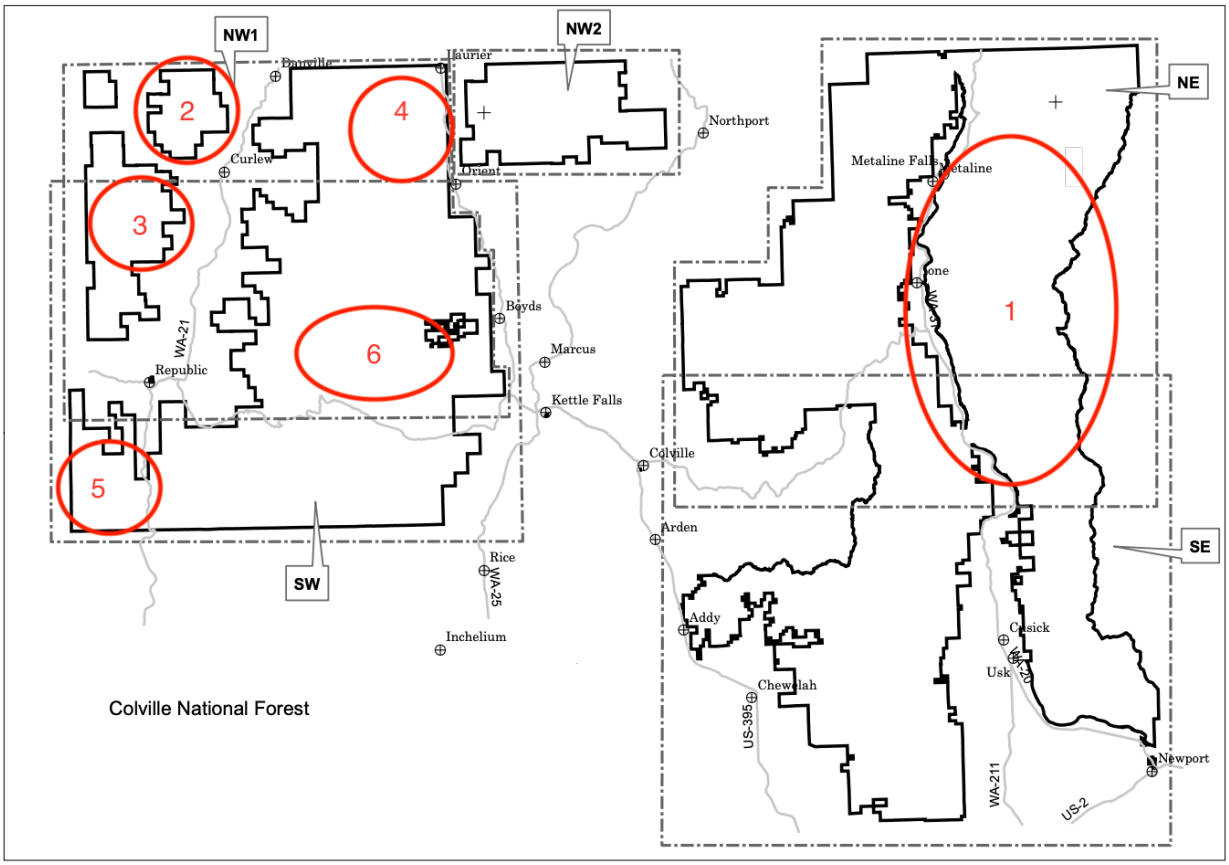


Figure B. Screen shot of the Colville's MVUM NE map, focused on Forest Service Road 1200000 (from area 1 identified in Figure A above).

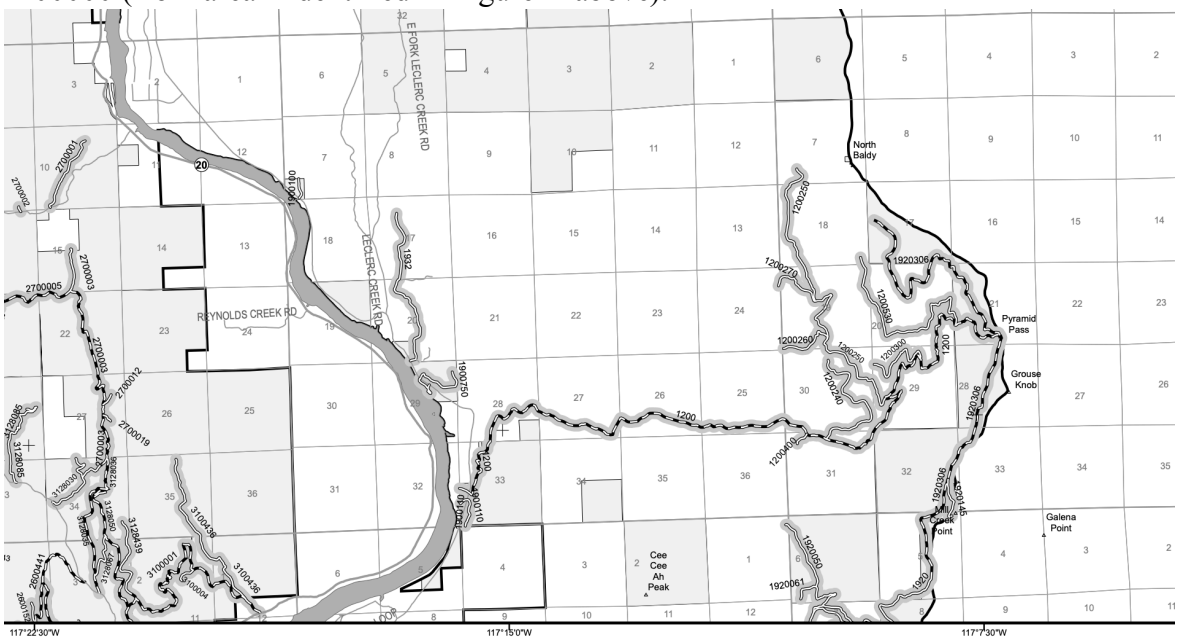


Figure C. Screen shot of the Colville's MVUM NE map, focused on Forest Service Road 1934000 (from area 1 identified in Figure A above).

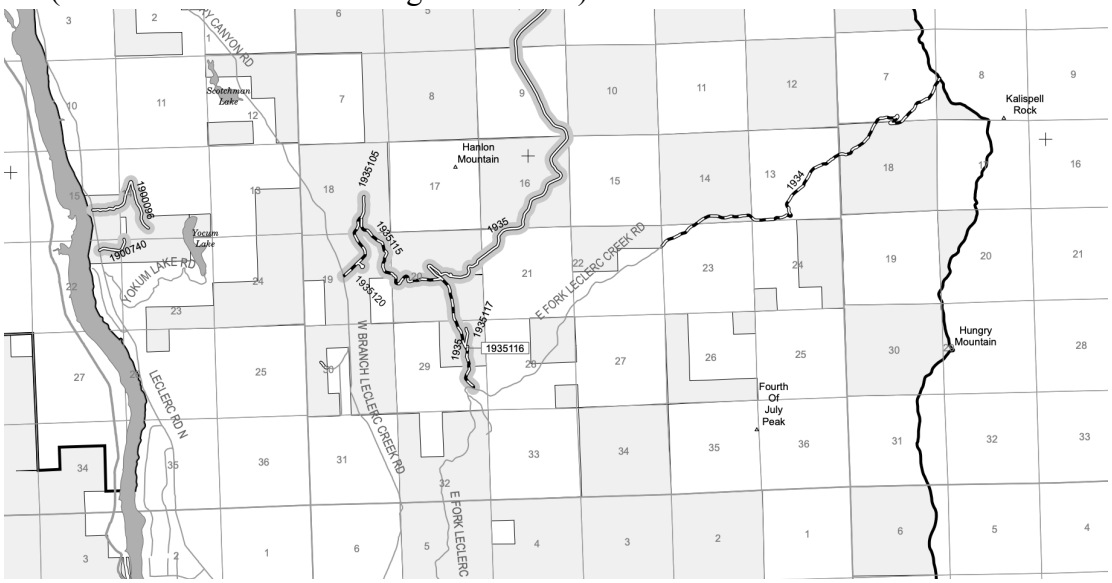


Figure D. Screen shot of the Colville's MVUM NE map, focused on Forest Service Road 1935000 (from area 1 identified in Figure A above).

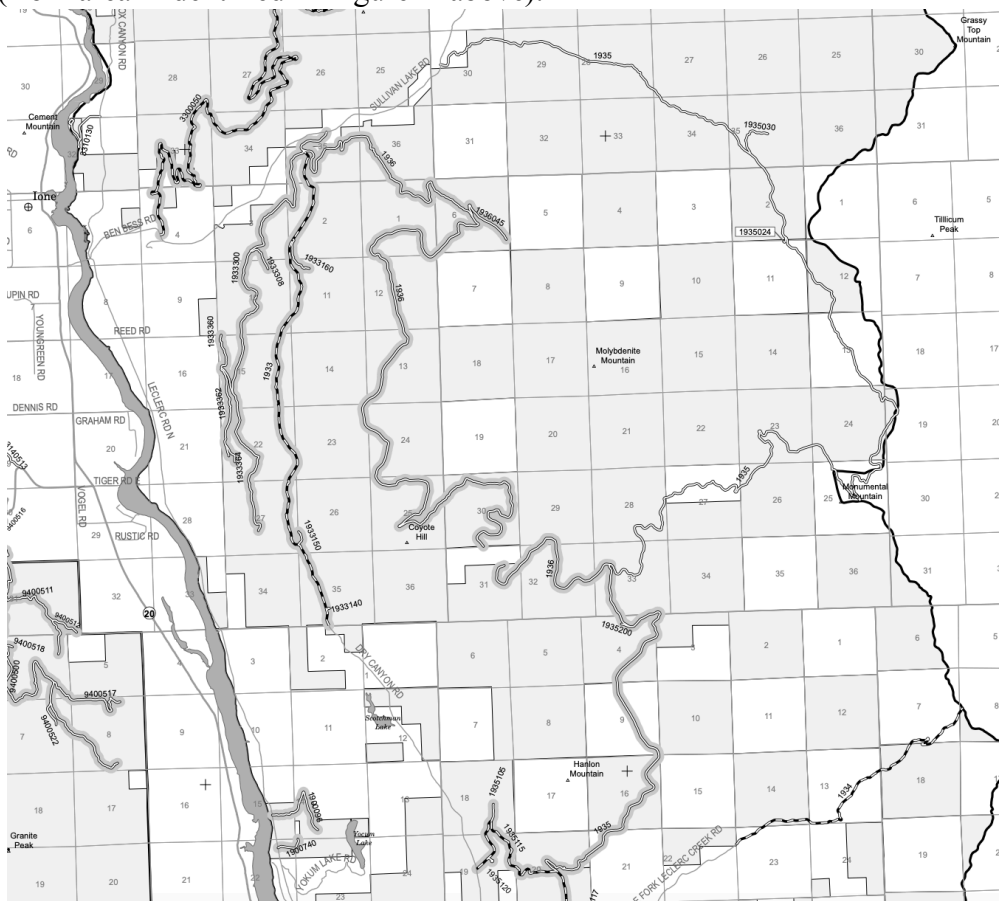


Figure E. Screen shot of the Colville's MVUM NW1 map, focused on Forest Service Road 2113000 (area 2 identified in Figure A above).

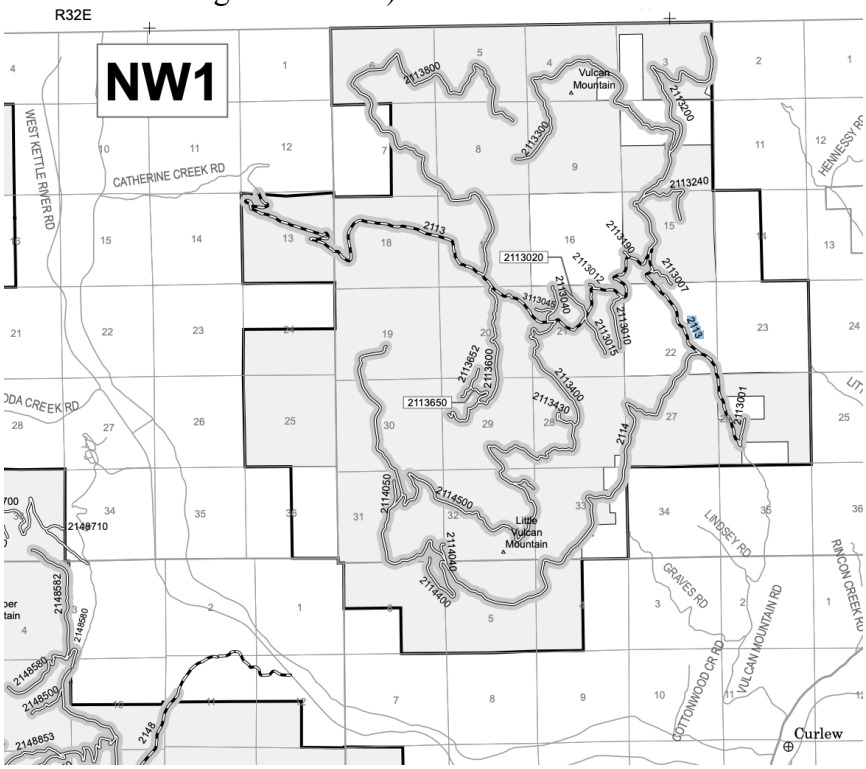


Figure F. Screen shot of the Colville's MVUM NW1 map, focused on Forest Service Roads 2148000, 2149000, 2150000 (area 3 identified in Figure A above).

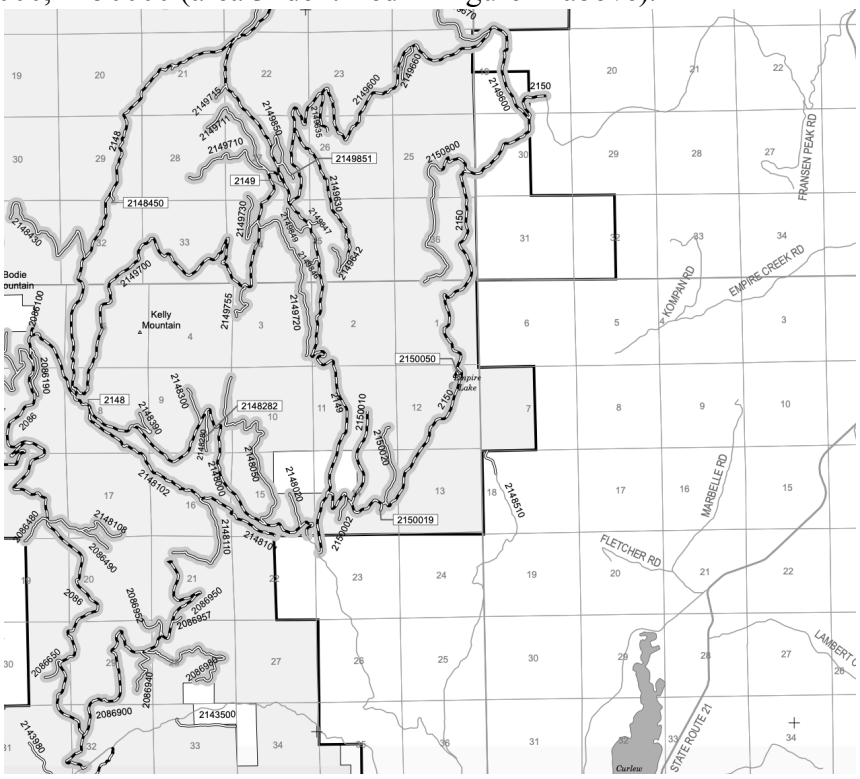


Figure G. Screen shot of the Colville's MVUM NW1 map, focused on Forest Service Roads 9576150, 9576160, 9576200, 9576215, 9576218, 9576220 (area 4 identified in Figure A above).

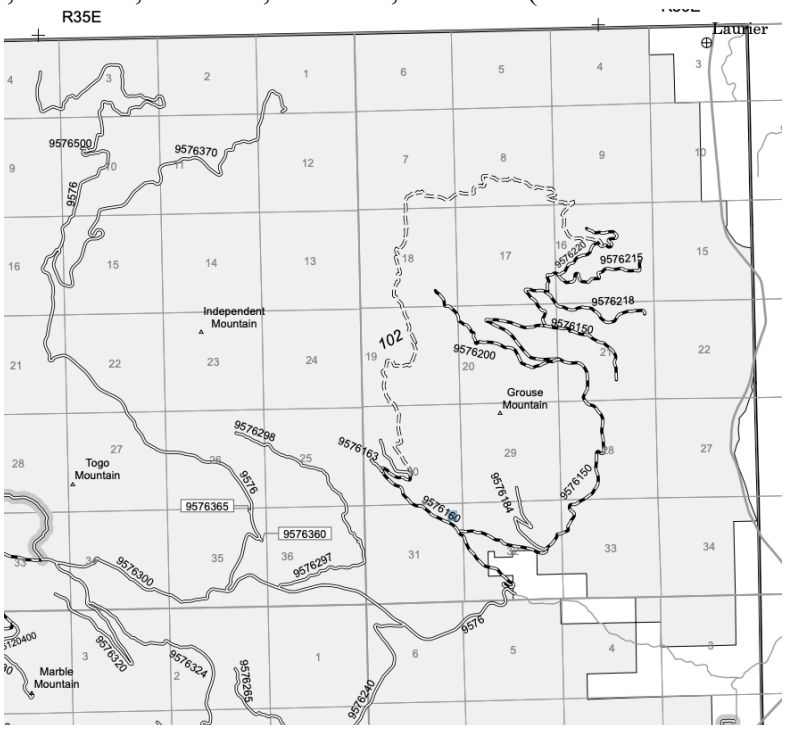


Figure H. Screen shot of the Colville's MVUM SW map, focused on Forest Service Roads 5300000, 5300500, 5320000, 5330000 (area 5 identified in Figure A above).

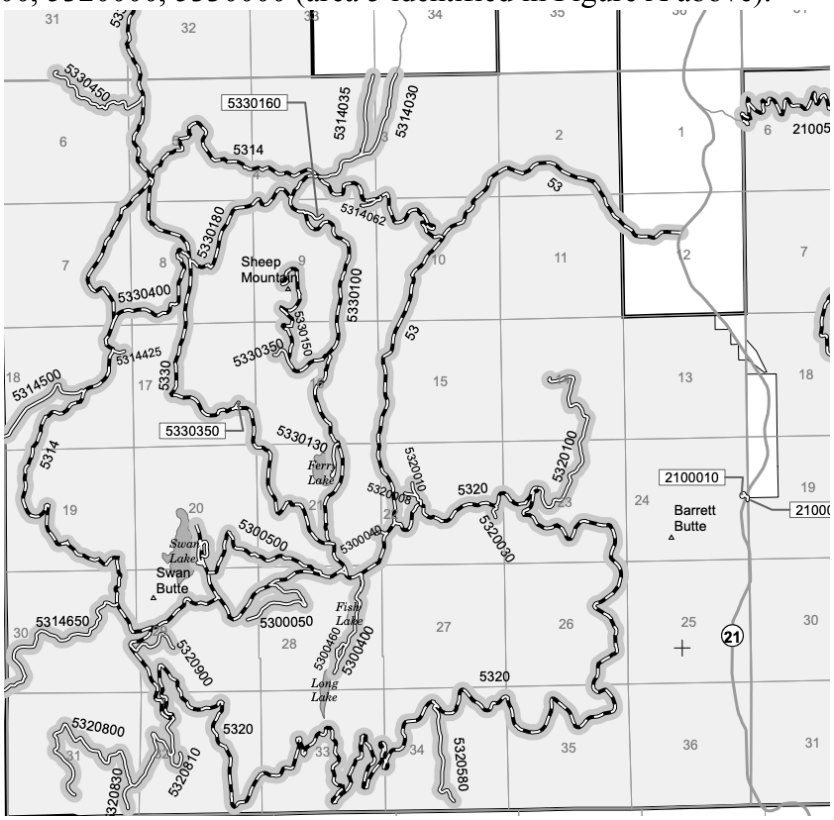
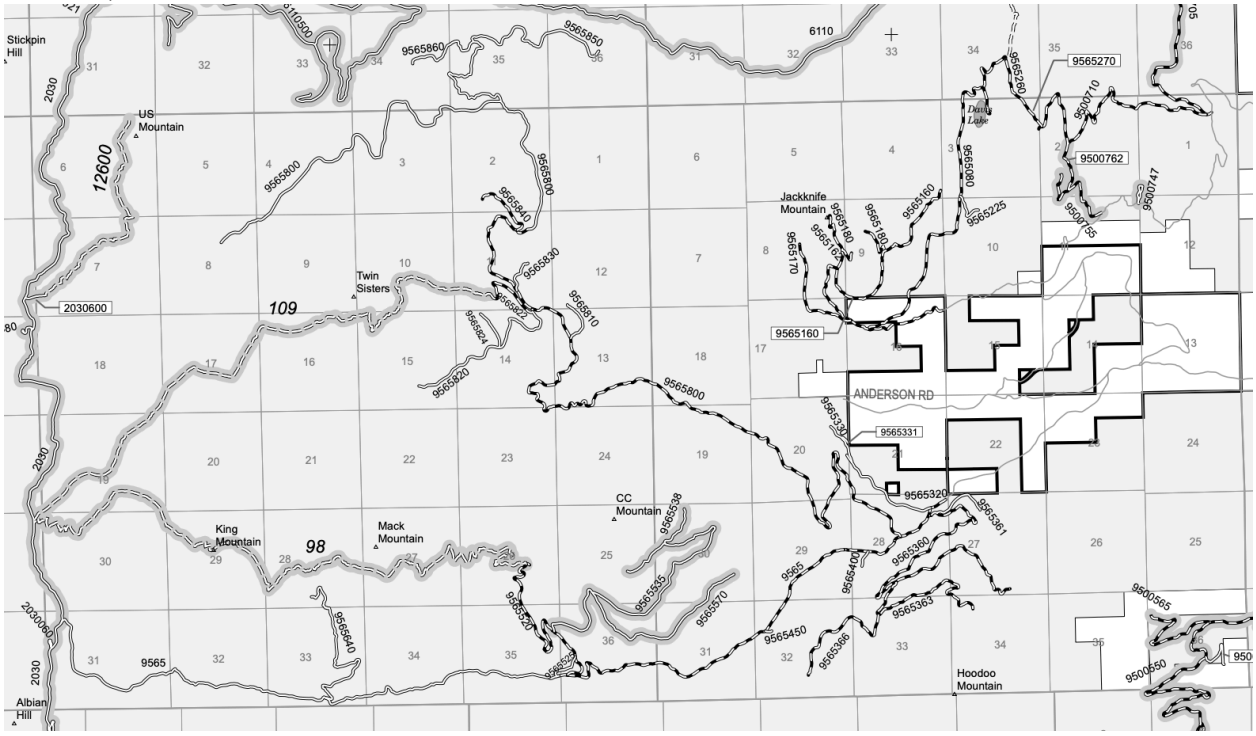


Figure I. Screen shot of the Colville's MVUM SW map, focused on Forest Service Roads 9565000, 9565080, 9565260, 9565270, 9565520, 9565800, 9565820 (area 6 identified in Figure A above).



Journal of Conservation Planning Vol 8 (2012) 12 – 24

Off-road vehicle best management practices for forestlands: A review of scientific literature and guidance for managers

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ABSTRACT: Management of off-road vehicles (ORVs) on forestlands has become increasingly challenging as various user groups compete for a finite amount of land on which to recreate. Additionally, no uniform methods exist for managing ORVs in forests to reduce their impacts to the environment and lessen conflicts with other user groups. The objectives of this paper are to review recent research on the environmental and social effects of ORVs in forested landscapes, and based upon the best available science, propose Best Management Practices (BMPs) for forestlands to help minimize ORV impacts. We found extensive scientific literature documenting the physical and ecological effects of ORVs in forestlands, ranging from soil compaction to non-native plant dispersal. Many species of wildlife are also affected by ORV use through direct and indirect mortality, disturbance and cumulative loss of habitat. Conflict with non-motorized users has been documented as well, resulting in diminished recreational experience and displacement of quiet users. The BMPs presented here for ORV management and monitoring in forestlands should help managers provide opportunity for motorized recreation while protecting natural resources and reducing user conflicts.

Keywords: Off-road vehicle, ORV, Best Management Practices, BMPs, erosion, stream sedimentation, invasive species, wildlife disturbance, user conflicts

INTRODUCTION

Management of outdoor recreation including off-road vehicles (ORVs) use is becoming increasingly challenging as more people recreate on public and private forestlands. Technological advances have given ORVs more power and control, allowing even beginners to access remote wildlands. This has increased the popularity of riding ORVs, and the potential for impacts on natural resources and conflicts between off-roaders and non-motorized forest visitors. The environmental and social impacts of their use have been well documented in hundreds of research articles, extensive literature reviews (e.g., Joslin and Youmans 1999, Schubert and Associates 1999, Gaines et al. 2003, Davenport and Switalski 2006, Ouren et al. 2008) and books (e.g., Knight and Gutzwiller 1995, Liddle 1997, Havlick 2002). While the majority of research on this topic has focused on arid locations (e.g., Webb and Wilshire 1983) and more recently beach environments (e.g., Lucrezi and Schlacher 2010), many recent studies have also addressed ORV use in forested landscapes.

Best Management Practices (BMPs) provide science-based criteria and standards that land managers follow in making and implementing decisions about human uses and projects that affect natural resources. BMPs are usually developed for a particular land use and are based on ecological considerations, legal obligations and pragmatic experience, and should be supported by the best available scientific knowledge. Several states have adopted ORV management plans, policies or strategic plans (e.g., Michigan Department of Natural Resources 2008, California State Parks 2009, Arizona State Parks 2010) and trail design, and construction and maintenance manuals have been written (e.g., Wernex 1994, Meyer 2002, Crimmins 2006). Unfortunately, no consistent broad-based guidelines have been developed for planning, implementing and monitoring off-road vehicle use on forestlands based on ecological considerations. In addition, most of the state plans and policies, and design and construction manuals, tend to consider ORV trail and forest road design, management, maintenance and monitoring from a viewpoint centered around legal and administrative stipulations, user needs and desires, and avoiding soil erosion. It is very seldom that such state plans or design and construction manuals take a more ecological or holistic viewpoint in deciding where to site trails, or one that stresses consideration of multiple natural resources.

This paper reviews recent scientific literature on ORV effects on forestlands, and based upon the best available science, proposes Best Management Practices (BMPs) to aid land managers in travel planning or in any decision-making process related to off-road vehicle management on forested lands. Each section reviews research on a key resource impact of ORVs, and is followed by a list of BMPs for planning and decision-making, implementation and monitoring to mitigate the impact. These BMPs will help transportation managers place ORV routes in areas where they can be enjoyed by motorized recreationists while minimizing harm to the environment and reducing user conflicts.

Off-road vehicle BMPs can be easily used by a manager who wants to incorporate science into creating an ecologically and socially sustainable route system. For example, research has found that the risk of stream sedimentation and negative impacts on aquatic habitat are highest at stream crossings. Thus, we propose the BMP to choose route locations with the fewest number of stream crossings when planning a route. In another example, research found that ORVs cause disturbance in a number of wildlife species. Accordingly, our BMP recommends setting levels of acceptable disturbance that are compatible with maintaining species viability. Furthermore, studies have found that closing routes benefits plant and wildlife populations. We further recommend that routes be closed and restored if there is an unacceptable impact to the resource.

This paper is an abridged and updated version of our original report, *"Best Management Practices for Off-Road Vehicle Use on Forestlands,"* available online at: http://www.wildlandscpr.org/ORV-BMPs. These BMPs have already been used during environmental analyses for travel management planning on many national forests (e.g., USDA FS 2009, USDA FS 2010, USDI BLM and USDA FS 2010). For example, the Ashley National Forest found them to be useful to fill information gaps and supplement existing direction (USDA FS 2009). Additionally, the Forest Service has recently included these Best Management Practices for reference in its report, *"Comprehensive Framework for Off-Highway Vehicle Trail Management"* (Meyer 2011). This official Forest Service document will be widely used in all future efforts to manage off-road vehicle use on national forest lands.

METHODS

To identify the most current research on off-road vehicles, we searched an online bibliographic database of over 20,000 citations documenting the physical and ecological effects of roads and off-road vehicles (http://www.wildlandscpr.org/bibliographic-database-search). First completed in 1995, this database is updated every two years by Wildlands CPR by systematically searching for literature related to roads and motorized recreation. The database contains a variety of scientific and "grey" literature including journal articles, conference proceedings, books, lawsuits, and agency reports. The database was most recently updated in 2010 using an established protocol that systematically searches 13 ecological and scientific databases. Seventeen primary keywords/descriptors were used to identify research on any road, highway, or ORV effect (positive or negative) on ecosystems, wildlife, and natural resources. Each primary keyword was used alone and in Boulian combination with 89 descriptor words and phrases. Each secondary keyword was used alone and in Boulian combination with primary keywords and other descriptor words and phrases (for a list of keywords please contact lead author).

Review of the Literature and Best Management Practices

We found extensive research on the effects of off-road vehicles (ORVs) on natural resources. Several studies published in the 1970s first documented the effects of ORVs on soils in the California desert. A flurry of studies followed resulting in the first book dedicated to this topic, *Environmental Effects of Off-Road Vehicles – Impacts and Management in Arid Regions* (Webb and Wilshire 1983). As ORV popularity expanded beyond the California deserts, so did research examining its effects around the globe. Impacts on streams, vegetation, and wildlife have come to the forefront of research, as have other ecosystems such as beach environments and forestlands - the primary focus of this review.

Soil Compaction and Erosion Research

Weighing several hundred pounds, ORVs compress and compact soil, reducing the absorption of water into the soil, resulting in increased flow of water across the ground (Sack and da Luz 2003, Meadows et al. 2008). This surface flow increases erosion of soils and can also add sediment to streams (Chin et al. 2004, Ayala et al. 2005, Welsh 2008), which degrades water quality, buries fish eggs, and generally reduces the amount and quality of aquatic habitat (Newcombe and MacDonald 1991).

In ORV use areas, soil erosion is accelerated directly by the vehicles, and indirectly by increased runoff of precipitation and by creating conditions favorable to wind erosion. Knobby and cup-shaped tires that help ORVs climb steep slopes are responsible for major direct erosional losses of soil. As the tire protrusions dig into the soil, forces far exceeding the strength of the soil are exerted, resulting in a "rooster tail" of soil and small plants thrown behind the vehicle. In an Ohio forest, Sack and da Luz (2003) measured erosional losses in high-use ORV areas as high as 209 kg/m^2. Meadows et al. (2008) found that ATV trails on U.S. Forest Service lands on average produced 10 times more sediment that undisturbed soils. It has also been demonstrated experimentally that sediment loss increases with increased ORV traffic (Foltz 2006), and the greatest sediment yields occur when trails are wet (Wilson and Seney 1994).

Most soils are vulnerable to compaction and erosion due to several factors. An analysis of more than 500 soils at more than 200 sites found that virtually all types of soils are susceptible to ORV damage (Schubert and Associates 1999). Clay-rich soils, while less sensitive to direct mechanical displacement by ORVs, have higher rates of erosion than most other soil types, and when compacted, produce a strong surface seal that increases rainwater runoff and gullying. Sandy and gravelly soils are susceptible to direct excavation by ORVs, and when stripped of vegetation, are susceptible to rapid erosion – usually by rill and gully erosion.

ORV impacts on forest soils are compounded by the loss of vegetation following ORV use. Stable vegetation keeps soil in place; once anchoring vegetation is removed, soil erosion increases. When vehicles damage or uproot plants, exposed soils easily become wind-blown or washed away by water. Wilshire et al. (1978) first described the direct effects of ORVs on vegetation, such as crushing and uprooting of foliage and root systems, as well as the indirect effects caused by the concomitant erosion. The indirect

effects include undercutting of root systems as vehicle paths are enlarged by erosion, creation of new erosion channels on land adjacent to vehicle-destabilized areas due to accelerated runoff or wind erosion, burial of plants by debris eroded from areas used by vehicles, and reduction of biological capability of the soil by physical modification and stripping of the more fertile upper soil layers. Biological soil crusts (commonly found in deserts, but also present in some forestlands) are particularly sensitive to wind erosion following ORV use and take decades to recover (Belnap 2003).

Stream Sedimentation Research

While driving on roads has long been identified as a major contributor to stream sedimentation (for review see Trombulak and Frissell 2000), recent studies have found ORV use on trails to be a significant source of fine sediment in streams (Chin et al. 2004, Ayala et al. 2005, Welsh 2008). Stream sedimentation greatly degrades aquatic habitat (Newcomb and MacDonald 1991). For example, Chin et al. (2004) found that in watersheds with ORV use streams contained higher percentages of sands and fine sediment, lower depths and lower volume – all characteristics of degraded stream quality.

While forest roads often have greater erosion potential, ORV routes often lack culverts or bridges at stream crossings, and users often simply drive across creeks. By fording creeks, sediment is released into the water by several mechanisms including: 1) concentration of surface runoff through the creation of wheel ruts, 2) exposed surfaces from the existence of tracks, 3) increased runoff from soil compaction, 4) vehicle backwash, and 5) undercutting of banks from waves (Brown 1994). A modeling exercise found that the average annual sediment yield from one ORV stream crossing in Alabama could reach 126.8 tons/ha (Ayala et al. 2005). Another study in Colorado found that ORV trails produced six times more sediment than unpaved roads and delivered 0.8 mg/km^2 of sediment to the stream network each year (Welsh 2008). Coe and Hartzell (2009) recently reported that the well-traveled Rubicon jeep trail in California's Sierra Nevada Mountains had rates of stream sedimentation 50 times higher than adjacent forest roads.

Best Management Practices for soils

PLANNING AND DECISION-MAKING BMPS FOR FOREST SOILS

- Do not locate routes in areas with highly erodible soils.
- Locate routes only in areas with stable soils; avoid locating routes in areas with biological crusts.
- Do not locate routes to climb directly up hillslopes. Route grades should be kept to a minimum and not exceed an eight degree (15 %) grade.
- Do not locate routes above treeline or in other high elevation areas that are ecologically significant and/or especially prone to erosion.
- Locate routes a minimum distance (as listed below) from waterbodies and wetlands:
  - Fish-bearing streams and lakes – 91 m (300 ft)
  - Permanently flowing non-fish-bearing streams – 46 m (150 ft)
  - Ponds, reservoirs, and wetlands greater than one acre – 46 m (150 ft)
- Do not designate new routes requiring stream crossings and prioritize closure, re-routing or creating bridge crossings for existing routes that have stream crossings.
- Do not locate routes in areas with soils contaminated by mine tailings, or mine tailings reclamation sites, at least until they are recovered, fully stable and able to sustain safe ORV usage. If route construction is necessary, reclamation activities should be completed prior to route construction.
- Close and restore routes that cause high levels of erosion (e.g., raise sedimentation above Total Maximum Daily Loads (TMDL) and reduce native fish population potential).
- Require all motorized camping to occur in designated campsites. Reclaim undesignated motorized camping sites.

IMPLEMENTATION BMPS FOR FOREST SOILS

- Identify the type or types of soil and steepness in the area that is being affected by ORVs and use this

information to prioritize mitigation efforts and create target management objectives to minimize erosion.

- Identify where waterbodies and wetlands are located, where routes cross them, and whether fish are present.
  - Prioritize stream crossing closures and route relocations, and if necessary, determine appropriate sites for upgrades and/or bridge crossings.
- Ensure adequate maintenance of bridges and culverts on routes to help prevent unauthorized stream crossings that might damage soils, streambanks, riparian vegetation, or other aquatic resources.
- Estimate the average soil loss for areas that are currently and obviously negatively affected by ORVs using the Universal Soil Loss Equation. Close and restore routes if the soils are determined to exceed standards for tolerable soil loss.
- If closing or moving a particularly damaging route is not possible, mitigate erosion with waterbars or other erosion control measures.
- Close and restore areas that have become "mud bogging areas," or are prone to "mud bogging."
- Close and restore routes where it has been determined, through analysis, that cumulative impacts of erosive activities (e.g., ORVs combined with fire, livestock grazing or other erosive stressors) are leading to a stream failing to meet erosion standards.
- Prioritize for closure renegade routes going directly up hillslopes, into wetland areas (including wet meadows), or adjacent to designated routes.
- Adaptively manage by closing or mitigating a damaging route if monitoring identifies that forest soil conditions are no longer in compliance with planning and decision-making BMPs.

MONITORING BMPS FOR FOREST SOILS

- Monitor for the amount of erosion occurring on all routes (designated and renegade). Gather data needed for the Universal Erosion Soil Loss Equation.
- Regularly survey for and identify renegade off-route spurs.
- Map stream crossings without culverts or bridges and note stream sedimentation levels and visible soil/channel impacts in these areas.
- Identify areas of significant amounts of bare soil or route-widening along routes using photographs and route width measurements.
- Monitor closed and restored routes to ensure the measures taken are effectively mitigating impacts to forest soils.

Trampling Impacts on Vegetation and the Spread of Invasive Plants Research

Riding a several hundred pound ORV off-route or cross-country can crush, break, and ultimately reduce overall vegetative cover. Vehicular impacts on vegetation range from selective kill-off of the most sensitive plants to complete loss of vegetation in large "staging areas." Plants that do survive are weakened, malformed, and more susceptible to disease and insect predation. Trampling by ORVs can also damage germinating seeds – even those in the soil. A study that examined ORV use on several U.S. National Forests found at least a 40 percent reduction in vegetation following ORV traffic (Meadows et al. 2008). Similarly, in a desert example in southern California, Groom et al. (2007) found 4-5 times fewer plants in an ORV use area than a protected area. However, when one of the study areas was closed to motorized use (and experienced a year of high rainfall), there appeared to be a recovery of that population.

In addition to trampling effects, ORVs are a major vector for non-native invasive plant species. With knobby tires and large undercarriages, ORVs can unintentionally transport invasive non-native species deep into forestlands. For example, one study found that in a single trip on a 16.1 km (10 mi) course in Montana, an ORV dispersed 2,000 spotted knapweed (*Centaurea stoebe*) seeds (Montana State University 1992). In Wisconsin, a survey of seven invasive plant species along ORV routes found at least one of these exotic plant species on 88% of segments examined (Rooney 2005). ORVs in roadless areas pose a particular risk of spreading invasive non-native species because roadless areas often have less weeds present. Gelbard and Harrison (2003) found that ORVs are the chief vector for invasive species infestation in California roadless areas, which were shown to be very important refuges for native plants. Furthermore, as a result of ORV use, the size and abundance of native plants may be reduced, which in turn permits invasive or nonnative plants to spread and dominate the plant community (GAO 2009).

Impacts to vegetation can have cascading effects throughout an ecosystem. For example, on an intensively used ORV route in Idaho, native shrubs, bunch grasses, and biological crust were greatly reduced close to the route and replaced with rabbitbrush (*Chrysothamnus* spp.) and non-native cheat grass (*Bromus tectorum.*; Munger et al. 2003). Because of these habitat changes, fewer reptiles were found alongside the route than were found 100 m away (328 ft). In another example of cascading impacts, Waddle (2006) found that three out of four species of ground-dwelling anurans in Florida were negatively influenced by ORVs due to trampling of vegetation and altered hydrology.

Best Management Practices for vegetation

PLANNING AND DECISION-MAKING BMPS FOR VEGETATION

- Locate routes in areas that do not have sensitive, threatened or endangered plant species.
- Locate routes where there are no unique plant communities such as aspen stands, bogs, wetlands, riparian areas and alpine habitat types.

IMPLEMENTATION BMPS FOR VEGETATION

- Identify sensitive, threatened, and/or endangered plants present in ORV use areas, as well as rare, fragile and/or unique plant communities (i.e., aspen stands, bogs, wetlands, riparian, alpine areas). Record the survey information into a GIS (Geographic Information System) database.
- Close areas where sensitive, threatened and/or endangered plant species are at risk.
- Remove invasive non-native plants from routes when feasible.
- Prohibit motorized camping in areas where invasive plants are a problem.
- Control invasive plants in staging areas to avoid their spread onto routes.
- Identify areas where invasive plants present a problem and require that all ORVs using such areas wash vehicles when exiting such areas.
- Close and restore routes documented as contributing to the spread of non-native invasive plants into relatively weed-free areas.
- Use native species when revegetating a closed route.
- Modify livestock grazing practices or halt grazing in newly restored areas where routes have been closed.

MONITORING BMPS FOR VEGETATION

- Monitor routes for sensitive, threatened, and/or endangered plants in ORV use areas, as well as rare, fragile and/or unique plant communities.
- Monitor for unauthorized spur routes into areas with sensitive, threatened, and endangered plant species.
- Monitor routes for presence and spread of non-native species or the decline of native species.
- Monitor closed and restored routes to ensure effective mitigation for damaged vegetation is occurring.
- Monitor the success of revegetation projects.
- Adaptively manage by closing or mitigating a route if monitoring identifies that vegetation conditions are no longer in compliance with planning and decision-making BMPs.

Wildlife Mortality, Disturbance, and Habitat Loss Research

Driving ORVs in forested environments has led to direct and indirect impacts on wildlife. When driven at high speeds, ORVs can collide with small animals and cause direct mortality. However, there are also many indirect impacts that can increase wildlife mortality. For example, in a review of research on mesocarnivores in the U.S., Weaver (1993) reported that ORV access increases the trapping vulnerability of American marten (*Martes americana*), fisher (*Martes pennanti*), and wolverine (*Gulo gulo*). Lynx (*Lynx lynx*) are also thought to be sensitive to road density due to increased trapping pressure (Singleton et al. 2002).

ORV use also increases access for illegal harvest of wildlife in areas that are difficult for game wardens to patrol. For wolves (*Canis lupus*), one study found that 21 of 25 human-caused mortalities in the US Northern Rockies occurred within 200 m (656 ft) of a motorized

route (Boyd and Pletscher 1999). Wolves often travel on roads and off-road vehicle routes where they risk increased poaching pressure. Studies in the US Great Lakes region have found that wolf persistence is reduced when road density exceeds approximately 0.6 km/km^2 (1 mi /mi^2; Wydeven et al. 2001). Grizzly bears (*Ursus arctos horribilis*) are also at risk from poaching and have been found to avoid open roads (e.g., Mace et al. 1996).

Elk (*Cervus canadensis*) have been the most extensively studied animal in relation to motorized access and ORVs. While recent studies have examined the effects of ORVs on elk (Vieira 2000, Wisdom et al. 2004, Naylor et al. 2009), most studies have looked more broadly at the impacts of motorized travel and roads. Research has found that increased motorized access results in decreased elk habitat and security, and increased elk mortality from hunter harvest both legal and illegal (Hayes et al. 2002, McCorquodale et al. 2003, see Rowland et al. 2005 for review).

Probably the most widespread ORV impact on wildlife is disturbance. Within individual species, a number of factors influence the degree of disturbance, including the animal's breeding status, size, and the size of the group it is with (Burger et al. 1995). Studies have shown a variety of disturbance is possible from ORVs, and while these impacts are difficult to measure, repeated harassment of wildlife can result in increased energy expenditure and reduced reproduction. Noise and disturbance from ORVs have been shown to result in a range of effects including increased stress (e.g., elk: Millspaugh et al. 2001), altered movement patterns (e.g., elk: Wisdom et al. 2004, Preisler et al. 2006, Naylor et al. 2009), avoidance of high-use areas or routes (e.g., Florida panthers: Janis and Clark 2002), and disrupted nesting activities (e.g., piping plovers: Strauss 1990).

Vieira (2000) found that elk moved twice as far from ORV disturbance than they did from pedestrian disturbance in Colorado. In studies in eastern Oregon, Wisdom et al. (2004) found that elk moved when ORVs passed within 1,640 m (5381 ft) but tolerated hikers within 500 m (1640 ft), and Naylor et al. (2009) found that elk increased their travel time and thus reduced time spent feeding or resting in response to ORV recreation. In some instances, however, low levels of disturbance do not appear to affect certain species persistence. For example, Zielinski et al. (2008) found that low levels of ORV disturbance in northern California did not change American marten occupancy or probability of detection. However, they did not measure the behavioral, physiological, or demographic responses.

Disruption of breeding and nesting birds is a particularly well documented problem (for review see Hamann et al. 1999). Several species are sensitive to human disturbance with the potential disruption of courtship activities, over-exposure of eggs or young birds to weather, and premature fledging of juveniles. Repeated disturbance can eventually lead to nest abandonment and lead to long-term bird community changes. In one example, Barton and Holmes (2007) found greater songbird nest desertion and abandonment close to ORV trails in northeastern California. While they also found less nest predation along ORV trails, some species had lower abundance than away from ORV trails.

To mitigate the impacts of disturbance, several authors have recommended spatial nest buffer zones from human disturbance for raptors (for review see Richardson and Miller 1997). Closing of ORV routes has been found to successfully restore wildlife habitat. Burger et al. (2007) found lower reproductive success of pine snakes (*Pituophus melanoleucus*) along ORV routes in the New Jersey Pinelands. However, after closing routes near nesting sites, the number of hatchlings increased to pre-disturbance levels.

Best Management Practices for wildlife

PLANNING AND DECISION-MAKING FOR WILDLIFE

- Set levels of acceptable disturbance that are compatible with maintaining species viability or recovery.
- Locate routes in areas that do not have critical habitat (formally designated or just important for survival) for sensitive, threatened and/or endangered wildlife species.
- Locate new routes where they are unlikely to significantly affect the populations of important native wildlife species specifically regarding reproduction, nesting, or rearing.
    - Do not locate routes in areas with concentrated or particularly important ungulate fawning or calving areas.

- Locate routes a minimum distance (as listed below) from waterbodies and wetlands:
  - Fish-bearing streams and lakes – 91 m (300 ft)
  - Permanently flowing non-fish-bearing streams – 46 m (150 ft)
  - Ponds, reservoirs, and wetlands greater than one acre – 46 m (150 ft)
- Locate routes as far as possible, but a minimum of 46 m (150 ft), from natural caves, tunnels, and mines where bat nurseries are commonly found.
- Locate routes in discrete, specified areas bounded by natural features (topography and vegetative cover) to provide visual and acoustic barriers and to ensure that secure habitat is maintained for wildlife.
- Locate routes in forest cover and not in open country. Long sight lines in open country make the visual effects of machines more pronounced.
- Adaptively manage routes that affect wildlife seasonal habitat needs. Reduce route density to below 0.6 km/km^2 (1 mi/mi^2) by permanently closing, or imposing seasonal use restrictions.

IMPLEMENTATION BMPS FOR WILDLIFE

- Survey for sensitive, threatened, and endangered animals, as well as critical habitat (formally designated or just important for survival), in ORV use areas. This survey information should be catalogued and regularly updated in a GIS database.
- Prohibit ORV use in critical habitat for sensitive, threatened, and endangered species.
- Maintain large unfragmented, undisturbed blocks of forestland where no routes are designated.
- Maintain and improve habitat security by protecting whole areas rather than individual route closures.
- Reduce road/route density to below 0.6 km/km^2 (1 mi/mi^2) in important wildlife areas.
- Conduct adequate nest searches to identify raptor nest sites. Seasonally close ORV areas in raptor nesting territories during sensitive nesting phases (e.g., March through August in the Rocky Mountain West).
- If routes are already in important native wildlife habitat, seasonally close during sensitive seasons.
  - Calving/fawning period for known key ungulate calving/fawning areas (e.g., May 15 through June in the Rocky Mountain West).
  - Critical ungulate wintering habitat/winter concentration areas (e.g., December through March in the Rocky Mountain West).
  - Migration corridors during migrations.
- Do not allow the use of ORVs off designated routes for game retrieval.
- Develop public information and educational programs targeting ORV users to raise wildlife awareness, such as information about wildlife species in the focal area, key wildlife sign, and the impacts of ORVs to those species.
- Address recovering carnivores such as grizzly bears and wolves:
  - Prohibit ORV use in grizzly bear habitats that provide important food sources during spring and early summer (e.g., April 1 through July 15 in the Rocky Mountain West). These habitat components include riparian shrub types, aspen stands, wet meadows, and avalanche chutes.
  - In areas with established wolf packs where there is a desire to reduce the potential for disturbance and the risk of illegal killing, limit ORV route densities to less than 0.6 km/km^2 (1 mi/mi^2).

MONITORING BMPS FOR WILDLIFE

- Monitor routes for sensitive, threatened, and endangered animals in ORV use areas.
- Monitor routes to identify whether they are impacting the reproduction, nesting or rearing of key indicator species.
- Monitor routes to identify whether there are unauthorized spur routes, especially if they approach waterbodies, wetlands and bogs that are key habitats for amphibians and reptiles; or natural caves, tunnels and mines where bat nurseries may occur.
- Monitor use concurrently with local wildlife populations to determine their impact on wildlife species.

- Monitor closed and restored routes to ensure they are effectively mitigating impacts to wildlife.
- Manage adaptively through closure, rerouting, or mitigation if monitoring identifies that wildlife conditions are no longer in compliance with planning and decision-making BMPs. ORV use in important wildlife habitats should only be allowed after peer- reviewed studies or data from wildlife and ORV monitoring conclude that wildlife populations will not be impaired.

Recreational Use Conflicts Research

Conflict is defined as an emotional state of annoyance with another group or person that can result in dissatisfaction with a specific experience (Yankoviak 2005). For example, a hiker seeking quiet in nature could experience conflict after encountering an ORV user on the same trail because the ORV use could be perceived as preventing the hiker from attaining his or her goal of a quiet, natural experience. Feelings of conflict often occur among quiet users when they hear motor vehicle noise, witness acts of great speed and/or reckless behavior, smell exhaust, and see visible environmental damage. This all leads to reduced opportunity and displacement of non-motorized recreationists from places they would normally frequent (Moore 1994, Stokowski and LaPointe 2000).

Both motorized and quiet recreationists prefer that trails be managed for multiple uses but with motorized and non-motorized activities separated (Andereck et al. 2001). Where trails are designated as multiple-use, heavy motorized use tends to cause other trail users to pursue opportunities at other locations in order to realize the desired experiences. There are numerous examples of non-motorized recreationists being displaced or leaving an area altogether where motorized use is common (e.g., Moore 1994, Stokowski and LaPointe 2000, Manning and Valliere 2002).

Best Management Practices for use conflicts

PLANNING AND DECISION-MAKING BMPS FOR USE CONFLICTS

- Designate motor-free Quiet Use Zones in both backcountry and front-country settings that emphasize wildlife needs and relatively low-impact recreational activities.
- Prioritize motorized route designations to protect public land resources and the safety of all public land users, and to minimize conflicts with other recreational uses and nearby residences.
- Ensure that ORV use does not preclude meeting the demand for hiking, equestrian and other non-motorized recreational uses.
- Do not locate ORV routes on trails, areas, or watersheds primarily used by hikers, horseback riders, mountain bikers, hunters, birdwatchers or other quiet recreationists and sportsmen, particularly those routes where unmanaged use has lead to motorized encroachment on non-motorized trails.

IMPLEMENTATION BMPS FOR USE CONFLICTS

- Undertake proactive and systematic outreach to motorized and non-motorized visitors in order to facilitate mutual understanding of the preferences and desired experiences of public land visitors.
- Establish trails or recreational working groups with both motorized and non-motorized stakeholders that meet regularly with land managers. These groups should work cooperatively to identify and resolve use conflict in a manner consistent with agency policy.
- Work with agency and local law enforcement to implement penalties and consequences for violating ORV regulations that will dissuade ORV users from such violations.
- Conduct surveys to establish the demand and opportunities for non-motorized recreation.
- Document use conflicts in a database that is shared with the public.
- Match ORV use to the available management and enforcement capacity (funding and staffing). This will assure that resources exist to guarantee adequate legal enforcement along all routes.

MONITORING BMPS FOR USE CONFLICTS

- Use monitoring to identify use conflicts on trails, areas, or watersheds traditionally used by hikers, horseback riders, mountain bikers, hunters or other quiet recreationists and sportsmen.

- Monitor closed and restored routes to ensure that motorized use is not occurring.
- Use monitoring data to limit or prohibit ORV access on routes where its use is leading to trespass onto other non-motorized trails, areas or watersheds.
- Require that motorized users have identification on vehicles equal in visibility to that found on highway vehicles.
- Monitor and enforce ORV noise violations by equipping law enforcement personnel with sound meters that can be easily calibrated and used in the field to test noise levels of ORVs at established trailheads and staging areas.

CONCLUSION

Scientific literature has firmly established ORV use as a significant perturbation to natural forest systems and ecology as well as creating conflicts among user groups. This underscores the need for widely adopted off-road vehicle Best Management Practices that are grounded in science. However, the effective implementation of these BMPs must be accompanied by adequate funding and staff levels in order to ensure that necessary monitoring and legal enforcement are carried out. With adequate funding and application of these BMPs, forest managers can designate routes that will provide for motorized recreation opportunities while managing ORVs with minimal harm to natural forests systems and the wildlife they support.

ACKNOWLEDGEMENTS

We thank insightful reviews of previous versions of this manuscript from John Carter, Jim Catlin, Matt Dietz, William Gaines, Barrie Gilbert, Gayle Joslin, Chris Kassar, Jason Kiely, Mary O'Brien, Sarah Peters, Tim Peterson, Randy Rasmussen, Adam Rissien, Tom Rooney, Bethanie Walder, Howard Wilshire, Michael Wisdom, and two anonymous reviewers. Funding was provided by the 444S Foundation.

LITERATURE CITED

Andereck, K.L., C.A. Vogt, K. Larkin, and K. Frey. 2001. Differences between motorized and nonmotorized trail users. *Journal of Park and Recreation Administration* 10(3):62-77.

Arizona State Parks. 2010. *Arizona Trails 2010: A Statewide Motorized and Non-Motorized Trails Plan*. Phoenix, AZ.

Ayala, R.D., P. Srivastava, C.J., Brodbeck, E.A. Carter, and T.P McDonald. 2005. Modeling sediment transport from an off-road vehicle trail stream crossing using WEPP model: In: Proceedings of the American Society of Agricultural and Biological Engineers Annual International Meeting. St. Joseph, MI. Paper Number 052017.

Belnap, J. 2003. The world at your feet: desert biological soil crusts. *Frontiers in Ecology and the Environment* 1(5):181-189.

Boyd, D.K. and D.H. Pletscher. 1999. Characteristics of dispersal in a colonizing wolf population in the central Rocky Mountains. *Journal of Wildlife Management* 63:1094-1108.

Burger J., M. Gochfeld, and L.J. Niles. 1995. Ecotourism and birds in coastal New Jersey: contrasting responses of birds, tourists and managers. *Environmental Conservation* 22:56-65.

Burger, J., R.T. Zappalorti, M. Gochfeld, and E. DeVito. 2007. Effects of off-road vehicles on reproductive success of pine snakes (*Pituophus melanoleucus*) in the New Jersey pinelands. *Urban Ecosystems* 10:275-284.

California State Parks. 2009. *Off-Highway Motor Vehicle Strategic Plan.* Off-Highway Motor Vehicle Recreation Division. Sacramento, CA.

Chin, A., D.M. Rohrer, D.A. Marion, and J.A. Clingenpeel. 2004. Effects of all terrain vehicles on stream dynamics: In: J.M. Guldin (ed.). Ovachita and Ozark Mountains Symposium: Ecosystem Management Research. USDA For. Serv. Gen. Tech. Rep. SRS-74. Pp. 292-296.

Coe, D. and M. Hartzell. 2009. *Assessment of sediment delivery from the Rubicon Jeep Trail.* Report to the Central Valley Regional Water Quality Control Board. Rancho Cordova, CA.

Crimmins, T.M. (ed.). 2006. *Management Guidelines for OHV Recreation.* National Off-Highway Vehicle Conservation Council. Redding, CA.

Davenport, J. and T.A. Switalski. 2006. Environmental impacts of transport related to tourism and leisure activities. In: J. Davenport and J.L. Davenport (eds.) *The Ecology of Transportation: Managing Mobility for the Environment*. Kluwer Academic Publishers. Dordrecht, Netherlands. Pp. 333-360.

Foltz, R.B. 2006. Erosion from all terrain vehicle (ATV) trails on National Forest lands. In: Proceedings of the American Society of Agricultural and Biological Engineers Annual International Meeting. St. Joseph, MI. Paper Number 068012.

Gaines, WL, P.H. Singleton, and R.C. Ross. 2003. Assessing the cumulative effects of linear recreation routes on wildlife habitats on the Okanogan and Wenatchee National Forests. USDA For. Serv. Gen. Tech. Rep. PNW-GTR-586.

Gelbard, J.L. and S. Harrison. 2003. Roadless habitats as refuges for native grasslands: interactions with soil, aspect, and grazing. *Ecological Applications* 13(2):404-415.

General Accounting Office. 2009. Federal Lands: Survey of Land Managers' Perspectives of Off-Highway Vehicle Use. GAO-09-547SP. Washington, D.C.

Groom, J.D., L.B. McKinney, L.C. Ball, and C.S. Winchell. 2007. Quantifying off-road vehicle impacts on density and survival of a threatened dune-endemic plant. *Biological Conservation* 135: 119-134.

Hamann, B., H. Johnston, P. McClelland, S. Johnson, L. Kelly, and J. Gobielle. 1999. Birds. In: G. Joslin and H. Youmans (eds.) *Effects of Recreation on Rocky Mountain Wildlife: A Review for Montana Committee on Effects of Recreation on Wildlife.* Montana Chapter of the Wildlife Society. Pp. 31-334.

Havlick, D.G. 2002. *No Place Distant: Roads and Motorized Recreation on America's Public Lands*. Island Press, Washington, D.C.

Hayes, S.G., D.J. Leptich, and P. Zager. 2002. Proximate factors affecting male elk hunting mortality in northern Idaho. *Journal of Wildlife Management* 66(2):491-499.

Janis, M.W. and J.D. Clark. 2002. Responses of Florida panthers to recreational deer and hog hunting. *Journal of Wildlife Management* 66(3):839-848.

Joslin, G. and H. Youmans. 1999. *Effects of Recreation on Rocky Mountain Wildlife: A Review for Montana. Committee of Effects of Recreation on Wildlife*. Montana Chapter of the Wildlife Society.

Knight, R.L. and K.J. Gutzwiller (eds.). 1995. *Wildlife and Recreationists: Coexistence Through Management and Research*. Island Press, Washington, D.C.

Liddle, M. 1997. *Recreation Ecology*. Chapman and Hall, London.

Lucrezi, S. and T.A. Schlacher. 2010. Impacts of off-road vehicles (ORVs) on burrow architecture of ghost crabs (genus *Ocypode*) on sandy beaches. *Environmental Management* 45:1352-1362.

Mace, R.D., J.S. Waller, T.L. Manley, L.J. Lyon, and H. Zuuring. 1996. Relationships among grizzly bears, roads and habitat in the Swan Mountains, Montana. *Journal of Applied Ecology* 33:1395-1404.

Manning, R. and W. Valliere. 2002. Coping in outdoor recreation: causes and consequences of crowding and conflict among community residents. *Journal of Leisure Research* 33(4): 410-426.

McCorquodale, S.M., R. Wiseman, C.L. Marcum. 2003. Survival and harvest vulnerability of elk in the Cascade Range of Washington. *Journal of Wildlife Management* 67(2):248-257.

Meadows, D., R. Foltz, and N, Geehan. 2008. Effects of all-terrain vehicles on forestlands and grasslands. USDA For. Ser. - San Diemas Technology and Development Center. San Diemas, CA.

Meyer, K.G. 2001. A comprehensive framework for off-highway vehicle trail management. USDA For. Ser. - Technology and Development Program. Missoula, MT.

Meyer, K.G. (ed.). 2002. Managing degraded off-highway vehicle trails in wet, unstable, and sensitive environments. USDA For. Ser. - Technology and Development Program. Missoula, MT.

Michigan Department of Natural Resources. 2008. *Off-road Vehicle Management Plan.* Lansing, MI.

Millspaugh, J.J., R.J. Woods, and K.E. Hunt. 2001. Fecal glucocorticoid assays and the physiological stress response in elk. *Wildlife Society Bulletin* 29:899-907.

Montana State University. 1992. Controlling knapweed on Montana rangeland. Circular 311, Montana State University, Extension Service, Bozeman, MT.

Moore, R.L. 1994. Conflicts on multiple-use trails: Synthesis of the literature and state of the practice. Fed. Hwy. Admin. Rep. No. FHWA-PD-94-031.

Munger, J.C., B.R. Barnett, S.J. Novak, and A.A. Ames. 2003. Impacts of off-highway motorized vehicle trails on the reptiles and vegetation of the Owyhee Front. ID Bur. Land Mgt. Tech. Bull. 03-3:1-23.

Naylor, L.M., M.J. Wisdom, and R.G. Anthony. 2009. Behavioral responses of North American elk to recreational activity. *Journal of Wildlife Management* 73(3):328-338.

Newcombe, C.P. and D.D. MacDonald. 1991. Effects of suspended sediments on aquatic ecosystems. *North American Journal of Fisheries Management* 11:72-82.

Ouren, D.S., C. Haas, C.P. Melcher, S.C. Stewart, P.D. Ponds, N.R. Sexton, L. Burris, T. Fancher, and Z.H. Bowen. 2007. Environmental Effects of Off-highway Vehicles on Bureau of Land Management Lands: A Literature Synthesis, Annotated Bibliographies, Extensive Bibliographies, and Internet Resources. U.S. Geol. Surv. Open-File Report 2007-1353.

Preisler, H.K., A.A. Ager, and M.J. Wisdom. 2006. Statistical methods for analyzing responses of wildlife to human disturbance. *Journal of Applied Ecology* 43:164-172.

Richardson, C.T. and C.K. Miller. 1997. Recommendations for protecting raptors from human disturbance: a review. *Wildlife Society Bulletin* 25:634-638.

Rooney, T.P. 2005. Distribution of ecologically-invasive plants along off-road vehicle trails in the Chequamegon National Forest, Wisconsin. *The Michigan Botanist* 44:178-182.

Rowland, M.M., M.J. Wisdom, B.K. Johnson, and M.A. Penninger. 2005. Effects of roads on elk: implications for management in forested ecosystems. In: M. Wisdom (ed.) The Starkey Project: A Synthesis of Long-term Studies of Elk and Mule Deer. Transactions of the 2004 North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, KS. Pp. 42-52.

Sack D. and S. da Luz. 2003. Sediment flux and compaction trends on off-road vehicle (ORV) and other trails in an Appalachian forest setting. *Physical Geography* 24(6):536-554.

Schubert and Associates. 1999. Petition to enhance and expand regulations governing the administration of recreational off-road vehicle use on National Forests. Wildlands CPR, Missoula, MT.

Singleton, P.H., W. Gaines, and J.F. Lehmkuhl. 2002. Landscape permeability for large carnivores in Washington: A geographic information system weighted-distance and least-cost corridor assessment. USDA For. Serv. Res. Paper PNW-RP 549.

Stokowski, P.A. and C.B. LaPointe. 2000. Environmental and social effects of ATVs and ORVs: An annotated bibliography and research assessment. School of Natural Resources, University of Vermont, Burlington, VT.

Strauss, E.G. 1990. Reproductive success, life history patterns, and behavioral variation in a population of piping plovers subjected to human disturbance. Dissertation: Tufts University, Medford, MA.

Trombulak, S.C. and C.A. Frissell. 2000. Review of ecological effects of roads on terrestrial and aquatic communities. *Conservation Biology* 14:18-30.

USDA FS (United States Department of Agriculture Forest Service). 2009. Draft Environmental Impact Statement Motorized Travel Plan. Ashley National Forest, Duchesne, Daggett Counties, and Uintah Counties, UT and Sweetwater County WY.

USDA FS (United States Department of Agriculture Forest Service Intermountain Region). 2010. Record of Decision for the Bridgeport Travel Management Project. Bridgeport Ranger District, Humboldt-Toiyabe National Forest, Lyon, Douglas, and Mineral Counties, Nevada and Mono County, CA.

USDI BLM and USDA FS (United States Department of Interior Bureau of Land Management, and United States Department of Agriculture Forest Service). 2010. Final Environmental Impact Statement - Gunnison Basin Federal Lands Travel Management. USDA For. Ser., Grand Mesa, Uncompahgre and Gunnison National Forest, USDI, Bureau of Land Management, Gunnison Field Office Gunnison, Delta, Hinsdale, and Saguache Counties, CO.

Vieira, M.P. 2000. Effects of Early Season Hunter Density and Human Disturbance on Elk Movement in the White River Area, Colorado. MS Thesis: Colorado State University, Fort Collins, CO.

Waddle, J.H. 2006. Use of amphibians as ecosystem indicator species. Doctoral Dissertation: University of Florida, Gainesville, FL.

Weaver, J. 1993. Lynx, wolverine, and fisher in the western United States: research assessment and agenda. USDA For. Serv. Intermtn. Res. Sta. Contract Number 43-0353-2-0598.

Webb, R.H. and H.G. Wilshire. 1983. *Environmental Effects of Off-Road Vehicles – Impacts and Management in Arid Regions.* Springer-Verlag, New York, NY.

Welsh, M.J. 2008. Sediment production and delivery from forest roads and off-road vehicle trails in the Upper South Platte River watershed, Colorado. MS Thesis: Colorado State University, Fort Collins, CO.

Wernex, J. (ed.). 1994. *Off-Highway Motorcycle and ATV Trails Guidelines for Design, Construction, Maintenance and User Satisfaction.* 2nd edition. American Motorcyclist Association, Pickerington, OH.

Wilshire, H.G., J.K. Nakata, S. Shipley, and K. Prestegaard. 1978. Impacts of vehicles on natural terrain at seven sites in the San Francisco Bay area. *Environmental Geology* 2:295-319.

Wilson, J.P, and J.P Seney. 1994. Erosional impact of hikers, horses, motorcycles, and off-road bicycles on mountain trails in Montana. *Mountain Research and Development* 14(1): 77-88.

Wisdom, M.J., H.K. Preisler, N.J. Cimon, and B.K. Johnson. 2004. Effects of off-road recreation on mule deer and elk. In: Transactions of the North American Wildlife and Natural Resource Conference 69:531-550.

Wydeven, A.P., D.J. Mladenoff, T.A. Sickley, B.E. Kohn, R.P. Thiel, and J.L. Hansen. 2001. Road density as a factor in habitat selection by wolves and other carnivores in the Great Lakes Region. *Endangered Species Update* 18(4):110-114.

Yankoviak, B.M. 2005. Off-road vehicle policy on USDA National Forests: evaluating user conflicts and travel management. MS Thesis: University of Montana, Missoula, MT.

Zielinski, W.J., K.M. Slauson, and A.E. Bowles. 2008. Effects of off-highway vehicle use on the American Marten. *Journal of Wildlife Management* 72(7):1558-1571.

ESA Notice Letter Attachment 4

Colville National Forest Press Release, available at:
https://www.fs.usda.gov/detail/colville/news-events/?cid=FSEPRD754132&fbclid=IwAR059EPgjQgCDJQnUp5B63HOD5Yqf0GwhNFKVGyblGKfD3WP5dtJPJ9rlos
(last accessed Sept. 4, 2020)

Damage to South-End Meadows Slows Restoration Project on Colville National Forest

Contact: **Starr Farrell (509) 684-7235**

Colville, Wash., (June 16, 2020) – Colville National Forest staff and their partners are seeing increased damage of Delaney and Calispell meadows due to motor vehicles operating off designated roads. These meadows are located within Pend Oreille County, approximately 22 miles northwest of Newport, Washington, and Stevens County, approximately 20 miles northeast of Chewelah, Washington.

The Tri-County Motorized Recreation Association, Colville National Forest OHV Ambassadors, and the Northeast Chapter of Backcountry Horsemen of Washington teamed up with Colville National Forest Damage Response Team and OHV Field Rangers to mitigate some of the recent damage caused by motor vehicles traveling off established roads damaging vegetation and impacting soils in the meadows.

The South-End restoration project began in 2014 and has led to vast improvements in upland, meadow, and riparian conditions, while also, enhancing motorized and non-motorized recreation opportunities in the area. This recent damage slows the progress of the project forcing limited resources to be refocused on previously rehabilitated areas.

"OHV Ambassadors have been providing educational outreach to motorized recreation users in the Colville National Forest for several years and has noticed this year there has been dramatic increase in off-road damage from large 4WD pickup trucks. Volunteer efforts to repair the damaged areas have been greatly assisted by USFS Law Enforcement and Rangers ticketing off-road drivers who willfully damage our forest resources," OHV Ambassadors Merrill and Anne Ott stated. "We are expanding our outreach to inform and educate forest visitors about staying on approved roads to hopefully prevent future problems."

The Colville National Forest and our partners ask for your help in protecting these fragile resources. We encourage visitors to practice the TREAD Lightly principles by

traveling on designated roads. If you see someone damaging the meadows, please **report it to any Colville National Forest office**.

Download and use the free digital MVUM, **Motor Vehicle Use Maps**, provided by Avenza to more effectively track your position while traveling along one of our more than 800 miles of roads. For any additional questions please feel free to **contact the Colville National Forest online**, or over the phone at (509) 684-7000.

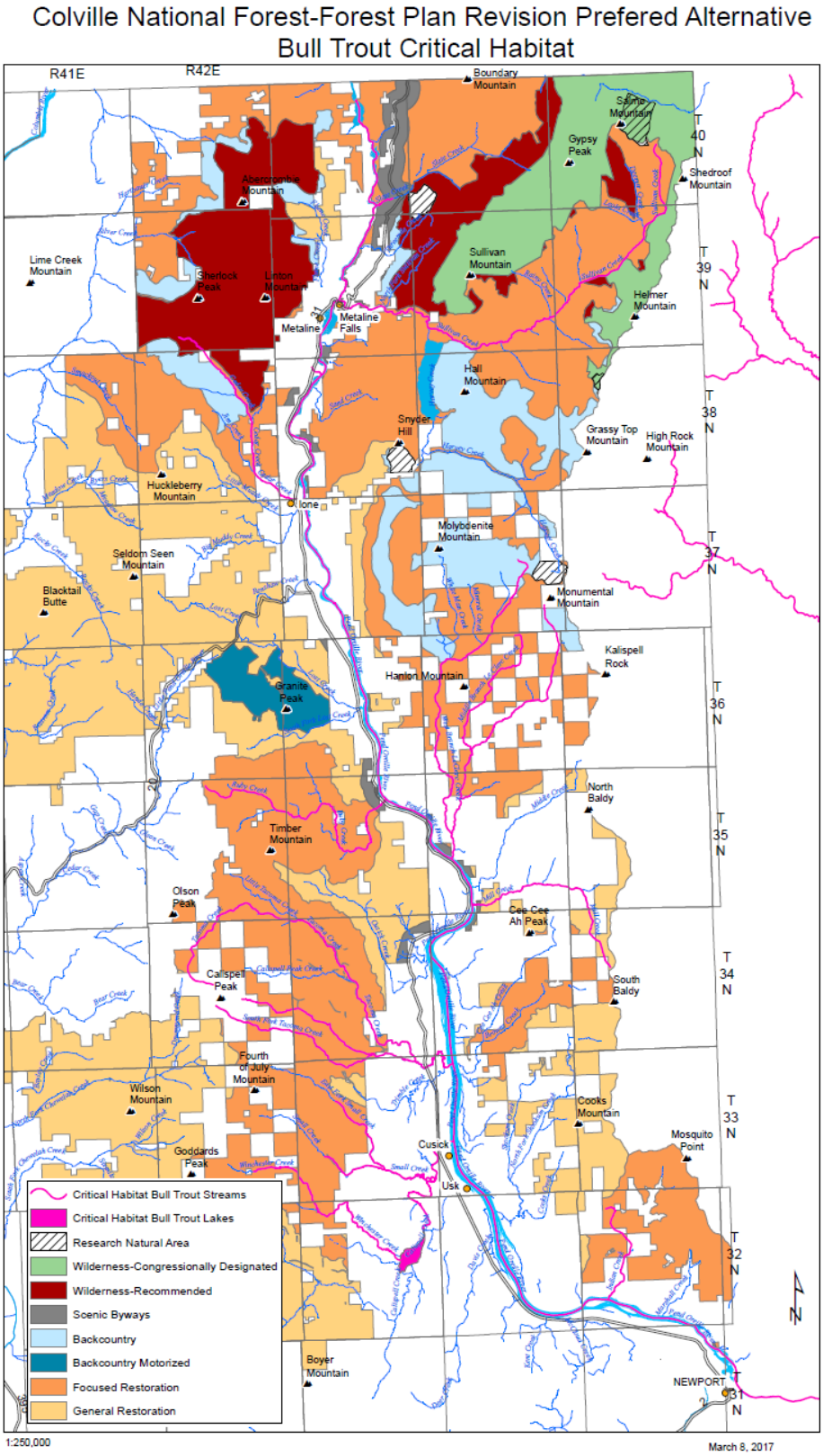

Figure 7. Critical Habitat and MAs in the Pend Oreille River Watershed.

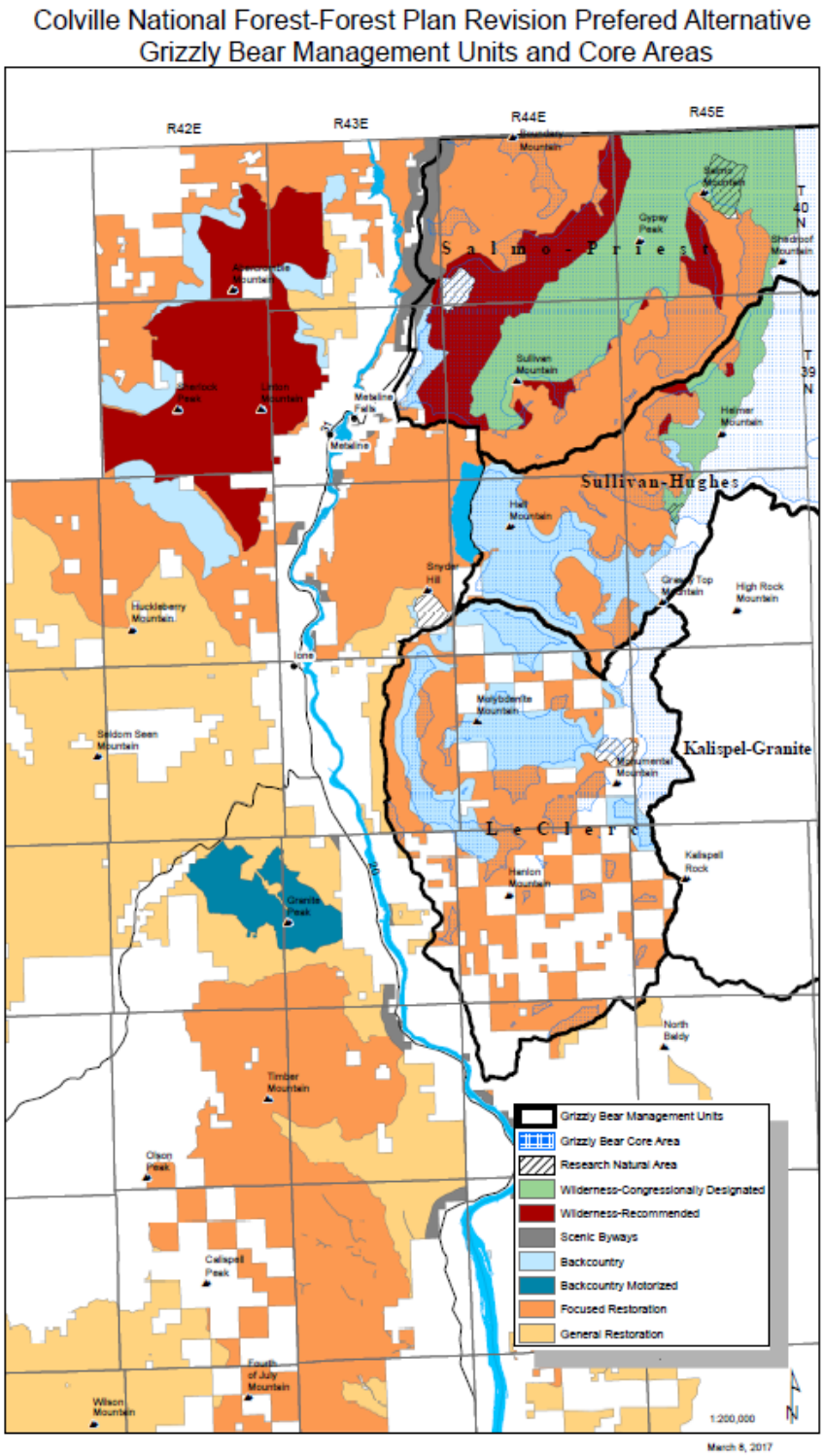

Figure 12. Management Areas, GBMUs, and Core Area.

The MAs that particularly provide habitats with limited human use and motorized access include: Congressionally Designated Wilderness, Recommended Wilderness, Backcountry, and Research Natural Areas. These management areas, with their associated desired conditions,

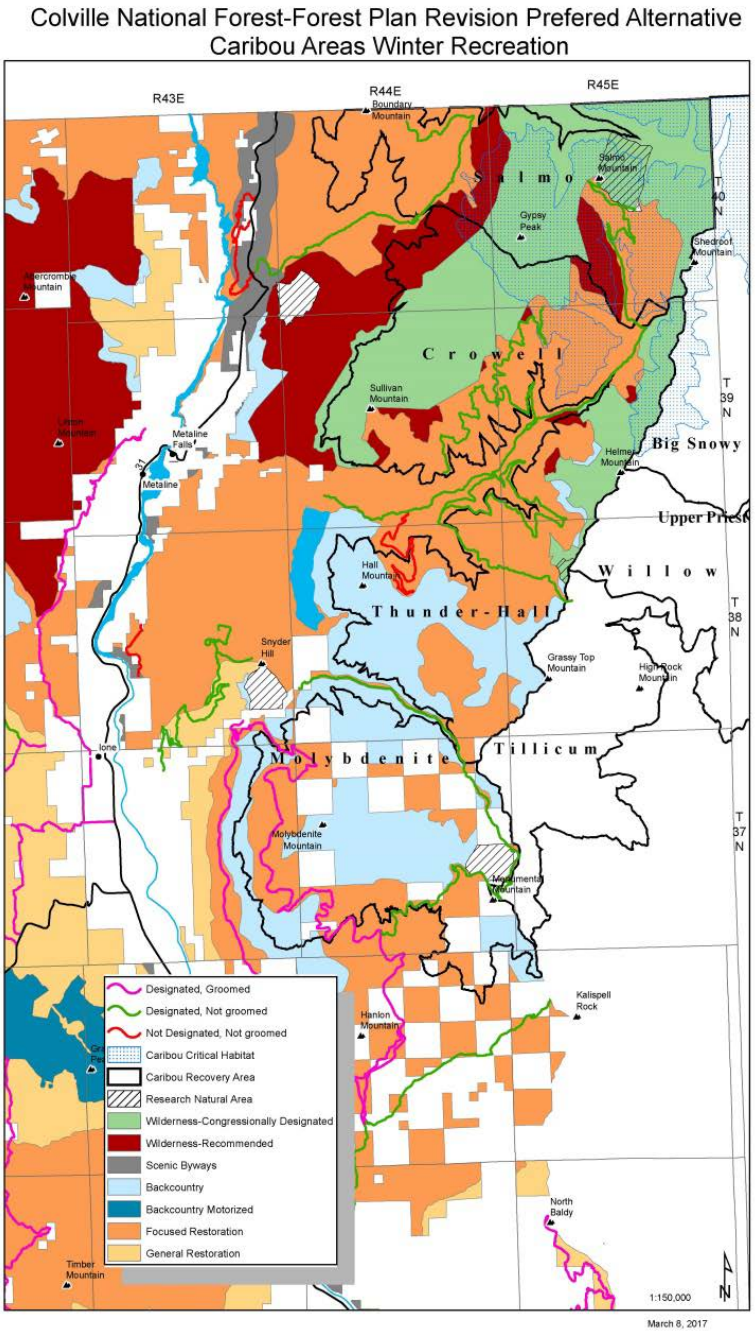

Figure 10. Caribou Critical Habitat and Winter Recreation (from BA Fig.9 p.140).

Conservation Role of the Action Area for Caribou and Critical Habitat

The CNF includes 4 of 17 caribou management areas within the caribou recovery area (USFWS 1994) in the U.S, and manages 98,093 acres in the caribou recovery area (more recent calculations are 99,513 acres; K. Honeycutt, 2017, *in litt.).*