

Appendix G

Analysis Criteria for RACR, FP Inventoried Roadless and BWCAW

A. Roadless Area Conservation Rule

The 2001 Roadless Area Conservation Rule (RACR) Final Rule listed nine characteristics of these RACR areas. Table G-1 shows the nine RACR characteristics and how they would be affected by each alternative. This was used as a comprehensive assessment of impacts to identify those areas where more specific analysis was needed. The specific analysis of effects to RACR is in EA section 3.9.

Table G-1. RACR characteristics and how they would be affected by each alternative.

Characteristics*	Alternative 1	Alternative 2
High quality or undisturbed soil, water and air	No new management actions would occur; therefore there would be no effects.	Effects to soils would be limited to the treatment areas (see EA section 3.8 for effects to the soil resource in the project area). No treatment areas would be within the RACR, therefore there would be no direct, indirect or cumulative effects to soils in the RACR areas. No treatment areas would be within the RACR; therefore there would not be any effects to water quality in the RACR. Effects to air quality from prescribed burning would occur beyond treatment areas and possibly extend into the RACR (see EA section 3.10 for further analysis of effects to air quality in the RACR areas).
Sources of public drinking water	No new management actions would occur; therefore there would be no effects.	There would be no effects to water quality as explained above.
Diversity of plant and animal communities	No new management actions would occur; therefore there would be no effects. Succession and other natural disturbances would change the vegetation in the area which would change the habitat conditions. There are populations of non-native invasive species in the Cascade Project Area (and Superior National Forest). Activities such as vehicle traffic or ATV use which currently exists along the edge of the RACR would continue to provide opportunities for populations to increase.	No treatments would occur in the RACR areas and therefore there would be no effects to the diversity of plant and animal communities within the RACR. Effects to plant and animal communities are described in EA sections 3.3, 3.4, 3.5, 3.6, the Biological Evaluation and the Biological Assessment. There is sufficient habitat in the project area to maintain a diversity of plant and animal species. The risk for non-native invasive species in RACR areas would be similar as under Alternative 1. No new actions would be taken in the RACR areas (such as timber harvesting or road construction) that would increase the opportunities for spread. Currently FR329, which runs alongside the RACR, received illegal ATV use (into the private property). There is no illegal ATV use off FR 329 into the RACR. Alternative 2 would authorize

Table G-1. RACR characteristics and how they would be affected by each alternative.

Characteristics*	Alternative 1	Alternative 2
		ATV use on the road (because of access needs to private property), however, no change is expected in the ATV use. This project would not create increased risk of non-native invasive populations increasing in the RACR areas. See EA section 3.8 for more analysis on non-native invasive species in the Project Area.
Habitat for endangered, proposed, candidate or sensitive species and species dependant on large, undisturbed areas	No new management actions would occur; therefore there would be no effects. Succession and other natural disturbances would change the vegetation in the area which would change the habitat conditions.	Effects to habitat for endangered, proposed, candidate or sensitive species and for those species dependant on large, undisturbed areas of land are described in sections 3.4, 3.5, 3.6, and in the Biological Evaluation and Biological Assessment. The Mississippi Creek RACR is now providing some potential for goshawk. The forests regenerated by Alternative 2 along with those created during the last half century in the area would likely provide improved habitat over what currently exists at least in the northern half of this area. Hence, though Alternative 2 would eliminate some potential goshawk habitat (171 acres from 10,000+ acre patch) enough would remain to provide continuity as future potential comes on line.
Primitive, semi-primitive non-motorized and semi-primitive motorized classes of dispersed recreation	No new management actions would occur; therefore there would be no effects.	See EA section 3.9 for further analysis of effects to recreation opportunity classes in the RACR.
Reference landscapes	No new management actions would occur; therefore there would be no effects.	There would be no actions within the RACR area and therefore there would not be any effects to reference landscapes of the RACR areas.
Natural appearing landscapes with high scenic quality	No new management actions would occur; therefore there would be no effects.	None of the actions outside of the RACR areas would affect the scenic quality of the RACR area. There would be no direct, indirect or cumulative effects to scenic quality of the RACR.
Traditional cultural	No new management actions would occur; therefore there would be no effects.	There would be no actions within the RACR area and therefore there would not be any direct, indirect or cumulative effects to heritage

Table G-1. RACR characteristics and how they would be affected by each alternative.

Characteristics*	Alternative 1	Alternative 2
properties and sacred sites		resources within the RACR. EA Section 3.10 describes the effects to heritage resources in the Project Area.
Other locally identified unique characteristics	No new management actions would occur; therefore there would be no effects. There are no locally identified unique characteristics.	The Forest Plan Revision FEIS did not identify any unique characteristics of Mississippi Creek or Brule Lake-Eagle Mountain RACR areas (FP FEIS Appendix C). The FP FEIS analysis does mention cedar in the Brule Lake-Eagle Mountain RACR as rare but the forest type is not unique. There are about 500 acres of cedar in the Project Area and 35,000 acres across the forest. Alternative 2 would not affect the cedar in the RACR area.
*From CFR 294.11 Definitions of roadless area characteristics		

B. Forest Plan Inventoried Roadless Areas

The Forest Plan Revision (FPR) FEIS states that any proposed site-specific projects *within* an inventoried roadless area will require an environmental analysis that considers effects of the project proposal on the roadless characteristics in the area (FP p. 3.7-7). The Cascade Project does not propose any action within any FP inventoried roadless area but harvest, site preparation and prescribed burning are proposed along the edge. The FPR FEIS used five criteria to define and analyze roadless areas (based on Forest Service Handbook 1909.12). Table G-2 shows the five criteria and how they would be affected by each alternative. This was used as a comprehensive assessment of impacts to identify those areas where more specific analysis was needed. As shown in the Table below, neither of the alternatives would effects the criteria for Forest Plan inventoried roadless, therefore no additional analysis was done.

Table G-2. Forest Plan Inventoried Roadless Area Criteria and how each alternative would affect them.

Criteria Focus	Criteria Description ¹	Alternative 1	Alternative 2
Vegetation	No more than 20 percent of the area harvested in the past 10 years.	No actions would occur therefore there would be no change to the vegetation criteria.	No harvest would occur in the FP inventoried roadless areas therefore there would be no change to the vegetation criteria.

Table G-2. Forest Plan Inventoried Roadless Area Criteria and how each alternative would affect them.

Criteria Focus	Criteria Description ¹	Alternative 1	Alternative 2
Setting/Solitude	At least about 2,500 acres of semi-primitive area if not adjacent to existing wilderness (regional guideline). No acre limit adjacent to existing wilderness.	No actions would occur that would change the size of the inventoried roadless areas.	No actions would occur that would change the size of the inventoried roadless areas.
Ownership	At least 70 percent federal ownership. No future non-federal land access needs.	No land ownership changes are a part of this project.	No land ownership changes are a part of this project.
Roads	No more than ½ mile of improved roads ² per 1,000 acres. No roads not under Forest Service jurisdiction.	No actions would occur; therefore there would be no change to this criterion.	Because all temporary roads developed for this project would be temporary and obliterated following the proposed management activities, there would not be any new improved roads and no change in the roads criteria.
Shape	A manageable area without narrow, elongated, or gerrymandered boundaries.	No actions would occur that would change the shape of inventoried roadless areas.	No actions would occur that would change the shape of inventoried roadless areas.

¹Criteria is from FP FEIS 3.7-2.

²An improved road is one created for the purpose of travel by passenger vehicles per August 13, 1997 Region 9 direction for Roadless Area Inventory for Forest Plan Revision, page 7.)

C. Boundary Waters Canoe Area Wilderness

It is the responsibility of the Forest Service (FS) to administer wilderness to protect the wilderness character. This analysis considers whether any actions outside the wilderness would affect the wilderness character. The Forest Service has developed guidelines and methods for wilderness monitoring within the General Technical Report Monitoring Selected Conditions Related to Wilderness Character: A National Framework. This report defines the four qualities of wilderness as: 1) untrammled, 2) natural, 3) undeveloped and 4) outstanding opportunities for solitude or a primitive and unconfined type of recreation. The report also identifies possible criteria for monitoring changes or effects. These are listed in Tables G-3A through G-3D.

FS monitoring protocol for wilderness helps frame site-specific NEPA analysis including cumulative effects by organizing the effects analysis around the four qualities linked to wilderness character and whether wilderness character would be affected over time. Evaluating actions against the specific measures developed for each of the four qualities can help managers understand how proposed actions either improve or detract from wilderness character.

In the Cascade Project Area, FR 170, a well used gravel road, is about a mile south of the BWCAW and all proposed activities would be on the south side of this road (away from the BWCAW). Because the road exists, there would be no new motorized roads or opportunities closer to the BWCAW than are present now. The closest proposed action to the BWCAW would be a 20 acre harvest on the south side of FR 170, over 0.8 miles from the wilderness. For many resources, 1/4 of a mile to one mile is the distance from treatment where effects are not measurable. Based on this, few effects to the wilderness would be expected. However, to ensure the proposed action would not degrade wilderness character, the criteria from the General Technical Report were used as a comprehensive screen to identify possible effects to wilderness character. Further analysis was done where there was the highest likelihood of effects and this is described in EA section 3.9 RACR, FP Inventoried Roadless and BWCAW.

Tables G-3A – G-3D Wilderness Character Indicators and How They Would Be Affected by the Alternatives.

Table G-3A. Quality of Wilderness: Untrammelled - wilderness is essentially unhindered and free from modern human control or manipulation.

Monitoring Question	Potential Core Indicator	Alternative 1	Alternative 2
What are the status and trends of intentional modern human controls or manipulation of wilderness?	Actions that control or manipulate (ex. Mechanical vegetation treatments)	There would be no change from current condition.	This project does not control or manipulate any resources located inside the BWCAW.
	Suppressed natural fire starts	There would be no change from current condition.	This project does not include any activities that would curb natural processes inside the BWCAW.

Table G-3B. Quality of Wilderness: Natural – wilderness ecological systems are substantially free from the effects of modern civilization.

Monitoring Question	Potential Core Indicator	Alternative 1	Alternative 2
What are the status and trends of human threats to natural conditions?	Pollutants that degrade air quality and air quality related values that affect: <ul style="list-style-type: none"> • Plants • Animals • Soil • Water (ex. Ozone and wet deposition) 	There would be no change from current condition.	Effects to air quality from prescribed burning would occur beyond treatment areas and possibly extend into the BWCAW. See EA section 3.10 for further analysis of air quality effects to the BWCAW.
	Developments that degrade the free-flowing condition of rivers and streams (ex. Dams)	There would be no change from current condition.	This project does include any activities that would degrade the free-flowing condition of rivers and streams in the BWCAW.
	Nonnative species that alter the composition or natural plant and animal communities (ex. Nonnative plants, animals, fish, livestock, invertebrates and pathogens)	There are populations of non-native invasive species in the Cascade Project Area (and Superior National Forest). Activities such as vehicle traffic or ATV use which currently exists would continue to provide opportunities for populations to increase.	The risk for non-native invasive species in the BWCAW would be similar as under Alternative 1. All proposed activities would be on the south side of FR 170 (away from the BWCAW). There would be no new motorized roads or opportunities closer to the BWCAW than are present now, therefore would not be an increased risk of non-native invasive species. See section 3.9 for more analysis on non-native invasive species in the Project Area.
	Light pollution that degrades night sky quality and night sky quality related values	There would be no change from current condition.	Implementation will be during daylight hours and there will not be any impact on the night sky.

Table G-3B. Quality of Wilderness: Natural – wilderness ecological systems are substantially free from the effects of modern civilization.

Monitoring Question	Potential Core Indicator	Alternative 1	Alternative 2
What are the status and trends of selected biophysical conditions and processes sensitive to human threats?	Visibility	There would be no change from current condition.	See EA section 3.10 for discussion on effects to air quality.
	Water Quality	There would be no change from current condition.	All treatments would follow Operation Standard and Guidelines that would minimize potential effects to streams. No treatments would affect the water quality in the BWCAW.
	Ecosystems, plant communities, and plant species that are rare or at risk.	There would be no change from current condition. Succession would continue to occur.	There would be no harvesting adjacent or within ½ mile of the BWCAW and therefore no changes to the ecosystem in the BWCAW. Effects to plant and animal communities are described in EA sections 3.3, 3.4, 3.5, 3.6, and 3.7, the Biological Evaluation and the Biological Assessment. There is sufficient habitat in the project area to maintain a diversity of plant and animal species.
	Fire regime	There would be no change from current condition.	The project does not affect the fuels or fire regime inside the BWCAW.

Table G-3C. Quality of Wilderness: Undeveloped – wilderness is essentially without permanent improvements or modern human occupation.

Monitoring Question	Potential Core Indicator	Alternative 1	Alternative 2
What are the status and trends of physical evidence of modern human occupation or modification?	Evidence of physical developments (ex. Buildings and roads)	There would be no change from current condition.	The project does not include activities that would construct or modify any physical developments inside the BWCAW.
What are the status and trends of the use of motorized equipment and mechanical transport?	Mechanical transport and motorized equipment use authorizations	There would be no change from current condition.	The project does not include any mechanized transport or motorized equipment inside the BWCAW.

Table G-3D. Quality of Wilderness: Outstanding opportunities for solitude or a primitive and unconfined type of recreation – wilderness provides outstanding opportunities for people to experience solitude or primitive and unconfined recreation, including the values of inspiration and physical and mental challenge.

Monitoring Question	Potential Core Indicator	Alternative 1	Alternative 2
What are the status and trends of outstanding opportunities for solitude?	Remote, trail-less wilderness	There would be no change from current condition.	An analysis of noise impacts is in EA section 3.10.
	Wilderness visitation	There would be no change from current condition.	All proposed activities would be on the south side of FR 170 (away from the BWCAW). There would be no new motorized roads or opportunities closer to the BWCAW than are present now that could provide opportunity for (illegal) access to the BWCAW.
What are the status and trends of outstanding opportunities for primitive recreation?	Creature comforts	There would be no change from current condition.	There would be no effects because this project does not construct or modify any creature comforts.
	Trail development level	There would be no change from current condition.	There would be no effects because this project does not construct or modify any trails inside the BWCAW.
What are the status and trends of outstanding opportunities for unconfined recreation?	Management restrictions on visitor behavior (ex. Permits, fees, regulations)	There would be no change from current condition.	There would be no effects because this project does not add or modify any existing management restrictions on visitor behavior.