

Appendices

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Appendix A–Public Involvement

This appendix discusses the public scoping efforts that took place pursuant to 40 CFR 1501.7 for the Lower Pratt River Trail reconstruction/relocation project within the Middle Fork of the Snoqualmie River drainage.

During the winter of 2001 and the spring of 2002, the Snoqualmie Ranger District began developing a proposed action for the reconstruction/relocation of the Lower Pratt River Trail within the Middle Fork of the Snoqualmie River drainage. Once the proposed action was developed, a “scoping” letter (dated May 7, 2002) was mailed to several groups, individuals, and organizations. In this letter, if these various recipients wished to respond, they were asked to submit scoping comments in writing, to the Ranger District by June 6, 2002. In addition to mailing scoping letters to groups, individuals, and organizations the District Ranger also contacted four tribal councils including: Colville Business Council, Snoqualmie Tribe, Tulalip Board of Directors, and Yakama Tribal Council and asked that if there was any input, comments should be received by May 7, 2002. In these same scoping letters, individuals were informed of a public meeting that would be held on May 23, 2002.

In August 2006, a review of the documents for this project indicated that there may be incomplete files. Thus, it was determined that it would be prudent to re-scope the tribes that were initially contacted in 2002. A second scoping letter was sent to the original tribal councils (listed above) on August 14, 2006. None of the tribal councils showed interest in the initial proposals however, following the second scoping letter (August 2006), “Ian Kanair” (Environmental and Natural Resources Department Director) from the Snoqualmie Tribe contacted the Snoqualmie Ranger District, District Ranger on or about July 5, 2007 requesting a meeting to discuss the Pratt Trail proposal (no other tribes responded to this second letter).

A meeting with Ian was held on August 8, 2007 where information was exchanged however, when asked, Ian stated that the tribal council did not have a position on this proposal at that time. Forest representatives at this meeting were: District Ranger – Jim Franzel, Public Services Representative – Steve Johnson, and Recreation Planner/Writer-Editor – Don Davison. As of this writing, there has been no further contact between the Snoqualmie Tribe and the District Ranger.

A public meeting was held on 5/23/02 and at this meeting attendees were given green comment cards that could either be turned in at the meeting or could be mailed to the North Bend Office. At the end of the scoping period, 7 of these green letters were received as well as 27 letters or emails totaling 34 comment letters.

The following table is a summary of the comments that were received, with notes on how the responsible official and the Forest Service interdisciplinary team addressed those comments in the analysis for the Lower Pratt River Trail project. See the project files (at the Snoqualmie Ranger District Office) for the actual letters. *Note: The number adjacent to the respondent is simply a tracking number.*

Several respondents have addressed similar concerns in each of their letters thus, each of the similar concerns have been grouped under one heading.

Table 1: Scoping Comments Summary

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|-------------------------|-----------------------------------|---|-----------------------------------|
| General Comments | 1) Private Individual | Please continue plans to reconstruct/relocate the 3.5 miles of the Lower Pratt River Trail. | Comment Noted. |
| | 2) Private Individual | I strongly believe that the proposed Lower Pratt River Trail should be built. This one, with its relatively low elevation, will offer much needed access when other trails are snowed in. | Comment Noted. |
| | 3) Private Individual | The Middle Fork needs more trails. We have fewer trails than we did 50 years ago. We should be building and maintaining more trails for increased visitation to the area, not less. | Comment Noted. |
| | 5) Private Individual | I would like to register my opinion in favor of rebuilding....the Lower Pratt River Trail. This will help disperse usage. | Comment Noted. |
| | 5) Private Individual | Hiking access to this area cannot possibly disturb it more than the 1930's logging blitz. | Comment Noted. |
| | 6) Private Individual | I strongly support your plan for the reconstruction of the Lower Pratt River Trail. | Comment Noted. |
| | 6) Private Individual | Most of the trails in the east King County area are fragile and cannot withstand the usage they are getting. We need to expand and improve the trails in the Snoqualmie Valley corridor. | Comment Noted. |
| | 10) Private Individual | I am writing to express appreciation for the decision to work on the Lower Pratt River Trail. | Comment Noted. |
| | 11) Snoqualmie Valley Trails Club | The SVTC... write in support of the re-opening of the old Middle Fork Trail... | Comment Noted. |
| | 22) Washington Trails Association | The Washington Trails Association supports the Pratt Connector Trail. The Pratt trail has been used by hikers for decades. | Comment Noted |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|------------------|-----------------------------------|--|-----------------------------------|
| | 22) Washington Trails Association | We recognize that there are a number of other trail opportunities ... We encourage consideration of these trails, although not at the expense of full study and consideration of the Pratt Connector. | Comment Noted |
| | 23) Snoqualmie Valley Trails Club | I write this letter supporting the rebuilding of the 3.25 mile Lower Pratt River Trail on behalf of the Snoqualmie Valley Trails Club. | Comment Noted |
| | 23) Snoqualmie Valley Trails Club | This trail does now exist and has existed for about 100 years. This trail was built long before trails were constructed from the "Sunset Highway" (I-90). | Comment Noted |
| | 23) Snoqualmie Valley Trails Club | I have walked either to or from the Pratt five times and have seen evidence of much activity. Various campsites, hunter' lookouts, and fire pits line the trail. | Comment Noted |
| | 23) Snoqualmie Valley Trails Club | The Middle Fork needs more trails. Today the trail system pales in comparison to the Middle Fork trail system of 60 years ago. | Comment Noted |
| | 25) Private Individual | I am writing this letter to encourage you to complete the proposed Lower Pratt River Trail reconstruction. | Comment Noted |
| | 26) Private Individual | On balance, I think reconstructing and relocation the tread downriver to the Pratt is a good idea. There are not many opportunities left for close-in hikes of any length that are accessible much of the year outside the wilderness. | Comment Noted |
| | 27) Private Individual | I believe that a trail of 3 ¼ miles from the Taylor River to the Pratt River is a good idea.... | Comment Noted |
| | 28) Private Individual | I wholeheartedly support your plans to reconstruct/relocate the first 3.25 miles of the Lower Pratt River Trail #1035. | Comment Noted |
| | 29) Private Individual | I am writing this letter in support of the proposed trail reconstruction/ rerouting for the Lower Pratt River Trail. | Comment Noted |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|------------------|-------------------------------------|--|---|
| | 30) Private Individual | I am greatly pleased that this project is going forward. I think it will be a much improved and safer way to travel over this route. | Comment Noted |
| | 31) Private Individual | I consider the reconstruction of the Lower Pratt River Trail, from the present Middle Fork Trailhead... to be of the highest importance. | Comment Noted |
| | 32) Private Individual | We strongly back the reconstruction/relocation where needed. This section of trail has been long overlooked.... | Comment Noted |
| | 32) Private Individual | Reopening this trail to more users fills a need for more lowland trails which can still be used during the late fall, winter, and early spring hiking seasons. | Comment Noted |
| | 33) Private Individual | While the trails that do exist are appreciated, more can be done. | Comment Noted |
| | 12) Biodiversity Northwest | This newly constructed trail would not be located in a desirable location for hikers. Constructing trails for day-hiking should be conducted where fewer negative impacts occur... | Comment Noted also, refer to Alternative Descriptions Chapter 2 and Effects Chapter 3 |
| | 13) ALPS, BBTC, MIDFORC, WTA | So there has been no real formal effort to address trail development issues in the valley at a scale larger than an individual trail. | Other trails were considered refer to pages 25-28 of this document. |
| | 14) North Cascades Wilderness Watch | The district does not have funding to maintain existing trails in the system, so why consider another trail? | Refer to pages 41-54 of this document. |
| | 15) Sierra Club | We are not however enthusiastic about a reconstruction of the abandoned Middle Fork Trail downstream from the Taylor confluence to the Pratt River. | Comment Noted |
| | 16) Private Individual | The newest and highest opportunity we have in the Middle Fork is the logical and necessary enlargement of protected wild-land both for the recreating masses and for the preservation of the wildlife... | Comment Noted |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|--------------------|--------------------------------------|--|--|
| | 18) Northwest Ecosystem Alliance | The 1963 Snoqualmie National Forest map does not show a trail on the east side of the Middle Fork nor does any other map newer than 1930... | The Pratt Trail is a system trail; refer to page 1 of this document. |
| | 20) Alps | ...request that you consider some other trail alternatives in the Middle Fork before starting to build a trail from the Gateway Bridge down to the Pratt. | Other trails were considered refer to pages 23-28. If this area becomes wilderness no other trails could be built in the Pratt Valley or vicinity (EA page 88-89). |
| | 18) Northwest Ecosystem Alliance | ...we believe there are abundant opportunities for trail enhancement and construction in less sensitive areas, for example by converting old logging roads to trails. | This project is converting roads and railroad grades to trail(s) (refer to alternative descriptions pages 30-32). |
| | 20) Alps | We believe that a number of shorter trails leading to lakes or viewpoints closer to the planned campground would better serve the need for new recreation opportunities. | Other trails were considered refer to pages 25-28 of this document. |
| | | | |
| Trail Users | Comments from public meeting | a) Close the trail to stock due to resource damage that will occur. b) Trail should be open to hikers only, no bikes or horses. c) Do not put hikers and bikers on the same trail. | See Chapter II of the EA, Alternative 3, and/or Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | | Constructing a trail will increase stock use, hiker use (resulting in damage and loss of solitude) in the Alpine Lakes Wilderness, especially at Pratt Lake. | See Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | | Constructing the trail may disperse use away from Pratt Lake (less impact and increased solitude). | See Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | | Proposal will increase use at Thompson Lake. | See Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | 1) Private Individual (Green Letter) | Do not make it a zoo and a disaster by opening it to wheeled users. The new bridge is there to cross the Middle Fork...perfect, except bikes are making it a muddy mire. | See Chapter II, Alternatives 2 & 3 and Chapter III, <i>Recreation – Effects of Implementation</i> . |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|------------------|--|---|--|
| | 3) Private Individual (Green Letter) | Please build this trail for all of the hikers, hunters, and others... but please not for the bikers to destroy. | See Chapter II, Alternatives 2 & 3 and Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | 4) Private Individual (Green Letter) | This is long overdue, stock access is OK. I do not think this should be a bicycle trail. | See Chapter II, Alternatives 2 & 3 and Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | 7) Private Individual (Green Letter) | Only very low, minimal impact usage of this natural area should be considered. It should be hiker only and further limiting the overall number of people in the parties. | Outside the wilderness there are few restrictions, inside the wilderness there are stricter use standards, refer to page 88-89 of this document. |
| | 8) ALPS, BBTC, MIDFORC, WTA (Letter) | We support bike use on the Middle Fork Trail from the Gateway Trailhead to the Dutch Miller Gap trailhead... | See Chapter II, Alternatives 2 & 3 and Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | 10) Private Individual (Letter) | I hope we can exclude stock animals from this trail. There are plenty of other places for horses and llamas and there will be lots of people on the trail. | See Chapter II of the EA, Alternative 3 |
| | 14) Cascade Wilderness Watch (Letter) | We strongly believe that no stock (including llamas) should be allowed on this proposed trail. Mountain bikes should be excluded as well. | See Chapter II of the EA, Alternative 3 |
| | 16) Private Individual (Letter) | Mechanical devices simply do not belong on the true left bank of the Middle Fork. They must be confined to selected areas in the area based on the true right bank. | See Chapter II of the EA, Alternative 3, and Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | 23) Snoqualmie Valley Trails Club (Letter) | Also, when and if this trail is rebuilt, we hope the FS will not allow bicycles access to this trail and the Pratt Valley. | See Chapter II of the EA, Alternative 3, and Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | 26) Private Individual (Letter) | I can't quite see stock being permitted, however, unless you do not expect the trail to ever get much hiking use. | See Chapter II of the EA, Alternative 3. |
| | 29) Private Individual | My primary concern is that the trail be open to bicycle users. There is a huge deficit of quality, backcountry trail experiences for mountain bicyclists on the Snoqualmie Ranger District. | See Chapter II, Alternatives 2 & 3 and Chapter III, <i>Recreation – Effects of Implementation</i> . |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|------------------|-----------------------------|--|---|
| | 30) Private Individual | I am somewhat concerned about the mountain bike issue. However, I hope that this reconstructed Lower Pratt River Trail will be for hikers and stock only... | See Chapter II, Alternatives 2 & 3 and Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | 31) Private Individual | Basically I am opposed to bicycles riding on single track trails... | See Chapter II, Alternatives 2 & 3 and Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | 32) Private Individual | The trail should be constructed and maintained as a hiking only trail. The mountain biking community is being given a large increase in connected trail mileage on the north side of the river. | See Chapter II, Alternatives 2 & 3 and Chapter III, <i>Recreation – Effects of Implementation</i> . |
| | | | |
| Wildlife | Comment from public meeting | Impacts to and loss of wildlife habitat, including grizzly bear habitat. | There would be no effect to suitable habitat for wildlife species and there would be no net loss of grizzly bear habitat. Further, there would be no cumulative effects (EA pages 57-66). |
| | 9) USFWS | The EA should specify and define which segments of this trail project constitute reconstruction, relocation, and new construction. These distinctions are important in analyzing potential impacts to grizzly bear core habitat. | Refer to Alternative 2 descriptions and effects to the grizzly bear EA pages 57-66. |
| | 9) USFWS | The environmental analysis should specify whether this trail segment is or is not a high-use trail. | Refer to Effects on Grizzly Bear EA page 63-64. |
| | 9) USFWS | Portions of the project area may meet the criteria for core habitat.analysis should address whether sections of the project would occur in core habitat, and if so, the potential losses of any grizzly bear core habitat, especially high-value habitat. | |
| | 9) USFWS | The proposed trail segment ties into the remaining Pratt River Trail. It is unclear whether this longer trail segment qualifies as a high use trail. This may also result in a loss of grizzly bear core habitat if this use exceeds 15 parties per week... | |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|------------------|-------------------------------------|---|---|
| | 9) USFWS | ...we recommend the environmental analysis identify and analyze alternatives that do not result in a loss of core habitat, as well as minimize loss of core habitat. | Refer to Alternative 1 |
| | 9) USFWS | Trail relocation may constitute a new development in LSR's and thus should not be permitted, unless it is neutral or beneficial. | The implementation of any alternatives would be neutral to the functioning of this LSR (EA page 62-63). |
| | 9) USFWS | Potential nesting habitat for the spotted owl and murrelet occurs in this watershed. The EA should address the short and long term effects of the project and subsequent public use upon these species. | Refer to effects EA page 65. |
| | 12) Biodiversity Northwest | With extensive low elevation wetlands, these areas are critical for early season feeding areas for grizzly bears and other wildlife. | The original trail is not in wet lands (EA page 75). Refer to effects to grizzly bear (EA page 63-64). |
| | 12) Biodiversity Northwest | The project clearly violates these rules which are designed to protect critical habitat for grizzly bears. | There would be no net loss of grizzly bear habitat. Further, there would be no cumulative effects (EA pages 63-64). |
| | 13) ALPS, BBTC, MIDFORC | ...a strong incentive for considering prospective trails collectively, rather than piecemeal, comes from grizzly bear recovery rules. | There would be no net loss of grizzly bear habitat. Further, there would be no cumulative effects (EA pages 63-64). |
| | 14) North Cascades Wilderness Watch | The consideration of grizzly and wolf habitat needs to be addressed and kept in mind. | The effects to the grizzly and wolf were considered (EA pages 63-65). |
| | 18) Northwest Ecosystem Alliance | The interim grizzly bear management guidelines for North Cascades Grizzly Bear Recovery Zone mandate no net loss of core security habitat... | There would be no net loss of core habitat (EA pages 63-64). |
| | 18) Northwest Ecosystem Alliance | Low elevation, early season habitat is in critically short supply (grizzly), particularly on the west side of the Cascades. | There would be no adverse effects expected to this species (EA page 63-64). |
| | 18) Northwest Ecosystem Alliance | Grizzly bears are extremely sensitive to human disturbance and avoid habitat that has high levels of human activity. | There would be no adverse effects expected to this species (EA page 63-64). |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|--------------------------------|-----------------------------------|---|--|
| | 18) Northwest Ecosystem Alliance | The land surrounding the Pratt River is also designated LSR. The proposed trail project into the Pratt traverses unstable, swampy terrain making the protection of these values in the presence of the increased traffic it will engender, problematic at best. | The implementation of any alternatives would be neutral to the functioning of this LSR (EA page 62-63). The is not in wetlands (EA page 75). |
| | 23) Snoqualmie Valley Trails Club | This is part of the grizzly bear study. However, has anyone seen a grizzly bear in the Middle Fork? No, no one. The Middle Fork has for 80 years been one of the most industrialized valleys in Western Washington Mountains. | Comment noted. |
| | | | |
| Alpine Lakes Wilderness | Comment from public meeting | Construction trail will increase use in over-used areas of the Alpine Lakes (e.g. Pratt Lake). | Refer to pages 88-89 in this document in reference to trail use and the wilderness. |
| | 5) Private Individual | The Pratt valley has far more camping potential than the narrow Middle Fork. This may help relieve pressure on the over used areas of the Alpine Lakes Wilderness. | Comment noted. |
| | 6) Private Individual | If we do not construct suitable trails, then the avalanche of humanity is going to overrun the wilderness with a multitude of boot trails that will be far more destructive. | Comment noted. |
| | 7) Private Individual | It should be noted that future wilderness designation is on the table now and this area should be noted and considered if the trail project is to be approved. | The possibility of a proposed wilderness was considered (EA pages 88-89). |
| | 8) ALPS, BBTC, MIDFORC | We support wilderness status for all National Forest lands south of the current Middle Fork Trail and will communicate that to the Forest Service... | The possibility of a proposed wilderness was considered (EA pages 88-89). |
| | 8) ALPS, BBTC, MIDFORC | BBTC support for Wilderness is contingent on bikers gaining access to the Middle Fork trail through the Forest Service Access and Travel Management (ATM). | Mountain Bikes were considered (EA page 27). |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|-----------------------------|--|--|--|
| | 14) North Cascades Wilderness Watch | In the project description, it states that the 1990 Forest Plan recommends consideration of new construction and reconstruction of existing, inadequately maintained trails outside designated wilderness. We agree... | The Pratt does exist (EA page 1). |
| | 14) North Cascades Wilderness Watch | We do not agree that the Pratt River should have a trail alongside of it because the trail would lead into wilderness in effect, providing an additional trailhead in an already overused wilderness. | Comment noted |
| | 23) Snoqualmie Valley Trail Club | Having walked the Middle Fork for 40 years, I am convinced that people, who come to the middle Fork, stay in the Middle Fork. Only a few will try to reach the Pratt Lake area.... | Comment noted |
| | 32) Private Individual | Allowing mountain bikes on this section of reconstructed `Lower Pratt River Trail would allow easy access for them to the trails up the Pratt River into the Wilderness. | Bikes were considered (EA pages 27). |
| | | | |
| Optional Locations | Comment from public meeting | Would like EA to analyze additional trail opportunities (e.g. Rainy Creek, Garfield Ledge, etc.). | Other trails were considered (EA page 26). |
| Comment from public meeting | Other trail proposals might better meet users' needs. | | |
| Comment from public meeting | Need to have more trails to viewpoints (E.G. Garfield Ledge, Stegosaurus, etc.). | | |
| 8) ALPS, BBTC, MIDFORC | We believe that a good path to building consensus here may be to broaden the EA planned for this Pratt Trail to include other possible trails in the immediate Taylor confluence area. | | |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|--------------------------|-------------------------------------|---|--|
| | 13) ALPS, BBTC, MIDFORC, WTA | Conservation groups have recently circulated a field-checked list of trail ideas in the Taylor confluence area which they will be willing to support. These include Rainy Lake... some or all of these would be logical candidates for inclusion and discussion... together with the Pratt. | Other trails were considered (EA pages 26). |
| | 15) Sierra Club | From a recreation standpoint, a reopened Taylor to Lower Pratt River Trail would offer 3 more miles of river-flat hiking. By contrast, official base-to-summit, base-to-viewpoint, or lake trails are entirely lacking in the lower valley... | |
| | 15) Sierra Club | ...I would suggest any member of the following list of potential trail construction projects for the Middle Fork/Taylor trailheads be considered (Rainy Lake etc.) ... | |
| | 20) ALPS | We would like to suggest four alternatives to the Pratt Trail: Garfield Ledges, Rainy Lake.... | |
| | 26) Private Individual | In any case, a trail or two to high points that do not provide wilderness access would be desirable. I think you should see whether a low-high loop might be feasible, with one leg returning via Thompson Creek and Russian Butte. | Comment noted |
| | 31) Private Individual | Quartz Creek watershed used to have a great trail ... I wish the FS would reopen this old trail. | Comment noted |
| | | | |
| Riparian Reserves | Comment from public meeting | Current trail location may impact riparian corridor. | Refer to pages 75-79 of this document for a discussion on Riparian Reserves. |
| | Comment from public meeting | Move trail to higher ground out of riparian corridor. | |
| | 14) North Cascades Wilderness Watch | Any trail along a stream and river corridors such as the proposed Pratt trail contain too many wet, muddy sensitive riparian areas. | |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|------------------------|---|--|--|
| | 15) Sierra Club Mid Fork Snoqualmie Team Leader | Encouraging human use along the bank of the river would bring significant impacts to wildlife and the riparian zone. | Refer to pages 75-79 of this document for a discussion on Riparian Reserves and effects to wildlife pages 57-66. |
| | 15) Sierra Club Mid Fork Snoqualmie Team Leader | An undisturbed and unvisited riparian corridor on the east bank of the Middle Fork is more valuable as habitat and more unusual... | Comment Noted. |
| | | | |
| Law Enforcement | Comment from public meeting | Too little Forest Service presence in the Middle Fork. | Comment Noted. |
| | Comment from public meeting | Increase FS presence by maintaining trailhead on weekends and not weekdays. | Comment Noted. |
| | | | |
| Public Safety | Comment from public meeting | Search and rescue missions in the Pratt are difficult without a trail (at least one mission per year in the Pratt). | Refer to pages 94-96 of this document |
| | Comment from public meeting | People shooting across the river will create a safety hazard on the new trail. | Comment Noted |
| | Comments from public meeting | Trail will provide easier access for search and rescue missions. | Refer to pages 94-96 of this document |
| | 32) Private Individual | The reconstructed trail will allow safe access to the lower Pratt trails and routes... | Refer to pages 94-96 of this document |
| | | | |
| Soils | 17) Private Individual | The subject EA should consider the physical properties of the clay soil which prevails in the lower valley. | Refer to pages 92-94 of this document. |
| | 16) Private Individual | These clays are extremely prone to erosion when wet... | Refer to pages 92-94 of this document. |
| | | | |
| Disagreements | Comment from public meeting | Proposal is new construction not reconstruction. | Refer to the proposed action and alternatives descriptions. |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|------------------|-------------------------------------|---|---|
| | Comment from public meeting | Too many valley-bottom trails in the Middle Fork already... | Comment Noted |
| | 6) Private Individual | I understand there is an environmental element strongly opposed to opening the area.... Environmentalists always crawl out of the woodwork to oppose anything and everything that would permit mankind access to the wilderness area. | Comment Noted |
| | 6) Private Individual | Mankind...has as much right to experience the forest as any animal.but we should not be denied access to the wilderness. | Comment Noted |
| | 12) Biodiversity Northwest | There simply is no trail between Taylor River and the Pratt River on the southeast side of the Middle Fork... | The trail does exist, EA pages 1,25-26. |
| | 14) North Cascades Wilderness Watch | We do take issue with the statement that this is reconstruction of the Lower Pratt River Trail... This may be accurate as far as reaching the Rainy Lake Trail but this is where the trail ends. | The trail does exist, EA pages 1,25-26. |
| | 16) Private Individual | By building a wheel-way from trail 1035 you would be putting in place what is sure to become the classic bombing run of the Seattle area. | Bikes were considered EA pages 27-28. |
| | 18) Northwest Ecosystem Alliance | The NWEA is strongly opposed to the proposed Lower Pratt River Trail project. | Comment Noted. |
| | 23) Snoqualmie Valley Trails Club | Some people want "blank" spaces on the map; this trail has never been blank. | The trail has existed since the early 1900's (EA pages 25-26. |
| | 24) Private Individual | To call the new routing and construction of MFT 1003 a reconstruction implies ridiculous scenarios such as all roads built over trails, reconstruction... | Refer to the alternative descriptions concerning various segments of the trail. |
| | 24) Private Individual | ...to claim "high use" for its trail is very disingenuous. You cannot back-up that claim with hard numbers from ground surveys. | Refer to pages 43-52 for trail usage numbers. |
| | 24) Private Individual | This trail does irreparable damage to the "blank spot" and in the future will just be another trail that needs repair and reconstruction. | The trail does exist, EA pages 1,25-26. Development in the Pratt started in 1935 & continued up until 1985, EA page 17. A trail bridge to the Pratt existed until approximately 1974, EA page 29. |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|------------------------|-------------------------------------|--|---|
| | 31) Private Individual | The present trail can still be followed all the way to Granite Creek... | Comment Noted. |
| | 15) Sierra Club | ...the downstream route from the Middle Fork bridge to the Pratt does not exist at all as a traveled route on the ground past Rainy Creek turn-off despite the fact that it's a pretty obvious travel route. | The trail does exist, EA pages 1,25-26. |
| | 32) Private Individual | The number of day hikers in the area is increasing. ...great need for improving and increasing the day-hiking trail opportunities throughout the forest. | Comment Noted. |
| | | | |
| General Impacts | 7) Private Individual | The impact of the trail construction itself would be kept to a minimum. | Comment Noted. |
| | 14) North Cascades Wilderness Watch | Resource problems and loss of solitude are obvious along many corridors... Apparent resource damage includes soil compaction, erosion, and loss of organic horizons... | Refer to pages 92-94. |
| | | | |
| Opportunities | Comments from public meeting | Allow FS to focus and concentrate recreation use and FS management activities. | Comment Noted |
| | Comments from public meeting | Create new, day hike options. | Comment Noted |
| | Comments from public meeting | Would like to see trail open to as many different uses as possible. | Comment Noted |
| | Comments from public meeting | Keep a blank spot on the map by not building a trail. | The trail does exist, EA pages 1,25-26. Development in the Pratt started in 1935 & continued up until 1985, EA page 17. A trail bridge to the Pratt existed until approximately 1974, EA page 29. |
| | Comments from public meeting | Expand analysis to include other trails in the area. | Comment Noted |
| | 11) STC | The Pratt is an historic old railroad grade (many railroad artifacts exist along this grade.... | Comment Noted |

| Issue or Concern | Respondent | Comment | Where Comment Addressed in the EA |
|------------------|----------------------------------|---|-----------------------------------|
| Funding | 18) Northwest Ecosystem Alliance | There are dozens of opportunities in the North Cascades for long trips into large roadless areas. In areas of such close proximity to Seattle the unmet demand is for day-hikes, particularly to viewpoints. We believe the scarce trail construction dollars would be much better spent elsewhere. | Comment Noted |
| | 18) Northwest Ecosystem Alliance | We believe that the sensitivity of the Pratt Valley makes this project an unwise investment of scarce funds that would have better, less controversial utility elsewhere. | Comment Noted |
| | 24) Private Individual | Existing trails need the funding and work... | Comments Noted |

Appendix B—Analysis of the Aquatic Conservation Strategy (ACS) Objectives

The Middle Fork Snoqualmie River watershed is in reasonably good condition from an aquatics perspective. However, the watershed has experienced large slope failures and erosion, which has been primarily associated with roads (Middle Fork Snoqualmie River Access and Travel Management (ATM), E.A., 2003). It is not expected that implementing any of the alternatives would affect the frequency and/or magnitude of these events. This is because the majority of the trail is either outside the Riparian Reserve or is being moved out of Riparian Reserves. Further, trail design and location would ensure that any problem areas (such as soils) are avoided thus ensuring the trail would not contribute to sediment entering the Middle Fork Snoqualmie River or its tributaries.

ACS Objective 1

Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted.

This project and any effects of implementation are small when compared to the watershed as a whole. On a watershed scale, the only large project in any of the associated drainages is the Middle Fork ATM E.A. In this plan, several roads and dispersed sites would be closed, decommissioned, or rehabilitated. With the Lower Pratt River Trail, the original tread would be reconstructed in several areas to current standards thus ensuring that the trail would not contribute to the erosion potential for this feature. Further, user built trails would be rehabilitated thus reducing the erosion potential of these trails. Finally, portions of the trail would be relocated onto stable railroad grades or truck logging roads far away from any tributaries or the Middle Fork Snoqualmie River. With this project, the only vegetation that would be removed is low growing brush and small trees. Thus, on a landscape level, the effects are so small, there would be no measurable effects including: effects to wildlife habitat, fisheries, grizzly bear, and others.

ACS Objective 2

Maintain and restore temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplains, wetlands, up-slope areas, headwater tributaries, and intact refugia. These network connections must provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian-dependent species.

None of the alternatives would affect connectivity beyond what currently exists. This is because trail clearing is minimal while not removing any large trees and no other land clearing activities are being proposed with this project. All stream crossings (both intermittent and/or perennial) would be designed to have the least affect on the aquatic resources.

ACS Objective 3

Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

None of the alternatives would have an effect on aquatic systems thus, physical integrity would be maintained. With either Alternative 2 or 3, two stream crossings are anticipated (Rainy Creek, a perennial stream, and one intermittent stream) In the case of Rainy Creek, a bridge would be built, and there would be little if any affects to the shoreline or banks and no effects to the bottom of the creek. In the case of the intermittent stream, the alternatives could have an affect on banks and shorelines because the crossing would be a foot path across the channel. However, the effects would be immeasurable.

ACS Objective 4

Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities.

All of the alternatives would maintain water quality by erosion control measures, trail design, and rehabilitation of the user-built trails.

ACS Objective 5

Maintain and restore the sediment regime under which aquatic ecosystems developed. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.

There would be no direct effect on the sediment regime of any stream or the unnamed intermittent tributary. This is due to trail design and construction techniques and the rehabilitation of user built trails.

ACS Objective 6

Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.

None of the alternatives are expected to measurably affect in-stream flows. This is because the majority of the project is outside of Riparian Reserves and the project is small in relation to the affected watershed.

ACS Objective 7

Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.

None of the alternatives are expected to measurably affect the timing of flows or water tables. This is because the majority of the project is outside of Riparian Reserves and the project is small in relation to the affected watershed.

ACS Objective 8

Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

Although a portion of the trail would be in Riparian Reserves, the impacts are small enough that species composition and diversity of plant communities would be maintained.

ACS Objective 9

Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian dependent species.

Although a portion of the trail would be constructed partially in Riparian Reserves, it is expected that the impacts are small enough that species distribution and populations would be maintained and any effects immeasurable.

Appendix C—Cumulative Effects

Definition

Cumulative impact is the impact on the environment which results from the incremental impact on an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor or collectively significant actions taking place over a period of time (40 CFR 1508.7).

Analysis

The analysis was guided by the June 24, 2005 memo *Guidance on the Consideration of Past Actions in Cumulative Effects Analysis*, Executive Office of the President, Council on Environmental Quality. Briefly, the memo states that agencies are to use scoping to determine whether, and to what extent, information about the specific nature, design, or present effects of a past action is useful for the agency's analysis of effects of a proposed action and its reasonable alternatives. "Agencies are not required to list or analyze the effects of individual past actions unless such information is necessary to describe the cumulative effect of all past actions combined" (Executive Office of the President, CEQ 2005). The memo also noted that agencies can generally conduct an adequate cumulative effects analysis by focusing on the current aggregate [or remaining, residual] effects of past actions without delving into the historical details of past, individual actions.

To complete the analysis of cumulative effects for the Lower Pratt River Trail project, the Interdisciplinary Team (ID Team) first considered the estimated direct and indirect effects on the environment that would be expected if any of the alternatives analyzed in detail were implemented. Once these effects had been determined, the ID Team then assessed the residual (current aggregate) effects of past actions that are, in the judgment of specialists, relevant, in that they could potentially overlap in time and space with the direct/indirect Lower Pratt River Trail project effects.

The team then assessed the spatial extent of the effects of the alternatives, resource by resource, to determine if they would add to, modify, or mitigate the on-going effects of the past, current, and expected future actions. For each resource, an area of potential effect was determined. Then, it was determined if any potential, existing, or residual effects were present for the identified projects. If there was no overlap in time (e.g. no remaining effects from past projects) and in space (extent of effects), there was no cumulative effect.

The initial area of potential effects centered on the area of reconstruction from the Middle Fork Trail Bridge down to the confluence of the Pratt and Middle Fork Rivers. For larger-ranging wildlife species, the area considered is larger.

Table 2 lists all of the past, present or reasonably foreseeable actions within the vicinity of the Lower Pratt River Trail that spatially and temporally overlap the estimated effects of the proposed

reconstruction/relocation, and where cumulative effects could occur. Also refer to Table 19 for projects within the vicinity of the Lower Pratt River Trail project that were reviewed and found not to contribute to potential cumulative effects.

Table 2: Past, Present, and Reasonably Foreseeable Actions that spatially and temporally overlap with the Lower Pratt River Trail, for Cumulative Effects

| Activity | Extent | Comment | Miles from the Project |
|--|---|--|---|
| Middle Fork Access & Travel Management EA; Many of the roads in the Middle Fork & Taylor Rivers are Closed to Vehicular Access | From the end of the pavement on DNR lands to the trailheads on both roads 56 and 5640. | All planned road closures have been completed. The last was Road 56 at the Dingford Creek trailhead | Extends from approx. 6 miles below to 5 miles above project area. |
| On going maintenance of trails 1003 and 1035. | From the Middle Fork Trail Bridge up to Goldmyer Hot Springs and beyond and from the confluence of the Pratt and Middle Fork up to the wilderness and beyond. | On going maintenance on a rotating schedule. | Trails extend from both ends of the reconstruction/relocation project. |
| The reconstruction of Road 56 which includes widening and possibly paving. | From the existing paving to the Middle Fork Campground. | This is a long-term plan, completion may not occur for another 5 – 8 years. | Extends approx. 6 miles below the project up to the trailhead at the beginning of the Pratt River Trailhead. |
| Huckleberry Land Exchange; Approx. 6,800 acres of land both inside and outside of the Pratt have come under National Forest ownership. | All private lands within the Pratt drainage changed ownership. | The land exchange occurred in 2001, non-ground disturbing decision. These lands are now being considered for inclusion into the Alpine Lakes Wilderness. | Three sections adjacent to the project area. |
| Portions of the CCC trail have been built (up to the Middle Fork trailhead). Long range plans are that the trail would connect to the King County Regional trail system. | The CCC trail parallels the Middle Fork River and ties into the Middle Fork Trailhead. | Tie through completed in 2006 in conjunction with the completion of the Middle Fork Campground. | From 2 ½ miles west of the Middle Fork Trailhead to the beginning of the Pratt River Trail. |
| The Middle Fork Campground was completed and opened to campers in 2006. | Located on the 5600510 road. | Open for the summer season only (May – September). | Approximately ½ mile north of the Lower Pratt River Trail. Connector trail ties the campground to the CCC trail which accesses the beginning of the Pratt and Middle Fork trails. |
| Past Clear Cut Timber Harvests | Past timber harvesting of lands within the Middle Fork, Taylor River, and Pratt Rivers (1930's – 1990's) | Clear Cut harvesting of old growth and mature forests by Weyerhaeuser and FS and other private land owners on the lower and mid-slopes of all the | Cutting occurred all around the proposed reconstructed/relocated trail area; the trail would be moved to an existing logging road/grade. |

| Activity | Extent | Comment | Miles from the Project |
|---|---|---|--|
| | | drainages. | |
| Ongoing annual road maintenance on roads 56 and 5640. | Brushing vegetation and blading the road surface on a rotating schedule as funds allowed. | On-going, annual occurrence. | Located on the opposite site of the Middle Fork from the project area. |
| A steel and wooden hiker bridge was constructed across the Middle Fork at Goldmyer Hot Springs. | Bridge is approx. 110' in length. | Project completed in F.Y. 2007. Footings were constructed in a roadbed and adjacent to the existing Middle Fork Trail. A few small trees (<10" in diameter) and some vegetation was removed. | Located approx. 8.5 air miles from the Lower Pratt River Trail project area. |
| Create a stable and safe crossing over Burnt Boot Creek along the Middle Fork Trail. | Bridge would be approx. 100' in length. | Project completed in F.Y. 2009_2012. For a bridge, footings would be constructed in the trail tread A few small trees (<10" in diameter) and some vegetation may be removed. For a "ford," few small trees (<10" in diameter) and some vegetation may be removed. | Located approx. 8.5 air miles from the Lower Pratt River Trail project area. |

Table 3 lists projects that have been known to occur in and around the Middle Fork and South Fork Snoqualmie River drainages that were found to not contribute to potential cumulative effects because these projects have been completed with no remaining, residual effects (that overlap temporally with project effects from the Lower Pratt River Trail project); the projects are located far enough away from the Lower Pratt River Trail project that, for all resources, effects would not overlap spatially; effects of the projects were only site-specific to the location of that project; or the estimated effects from the Lower Pratt River Trail would not measurably add to any residual effects.

Table 3: Projects Reviewed and Found Not Contributing to Cumulative Effects

| Project | Comments | Rational for not being considered |
|--|--|--|
| The original wooden truck bridge at Marten Creek has been replaced with a steel and wooden hiker bridge. | Project completed in F.Y. 2004 | This project is too far away; effects are limited and specific to the site. Located ~4.5 air miles NE of the project area. |
| There are approx 7.5 miles of trail to Snoqualmie Lake and Lake Dorothy that are to be reconstructed. | Project to be completed in F.Y. 2008-2010 | This project is too far away; effects are limited and specific to the site. Located ~7.5 air miles NE of the project area. |
| Denny Creek Recreation Residence Permit reissuance. | CE written in F.Y. 2007; reissue permits in January 1, 2009. | Non-ground disturbing, administrative action only, ~10 air-miles southeast of project. |
| High Lakes Trail 1012 and Snow Lake Trail 1013 reconstruction. | Project completed in 2004. | This project is too far away; effects are limited and specific to the site. Located ~7.0 air miles SE of the project area. |
| Snoqualmie Pass Ski Area Master Development Plan. | FEIS and ROD is expected to be completed and signed in 2008. | Within the headwaters of the South Fork Snoqualmie River; would not affect grizzly bear core habitat, too far away and effects would not combine. . Located ~8.5 air miles SE of the project area. |
| Road 9030 road repairs; replace two culverts as a result of 2006 flooding. | Expected completion in FY 2008. | Within the South Fork Snoqualmie River drainage; effects would not continue. Located ~9.5 air miles S of the project area. |
| South Fork Commercial Thinning Units (second growth) along the I-90 corridor. | Completed in 1992, units have a greater than 70% canopy closure and are considered recovered in hydrologic terms. | Within the South Fork Snoqualmie River drainage; no effects to grizzly bear core habitat otherwise, this project is too far away, and effects would not combine. Located ~9.5 air miles S of the project area. |
| South Fork Snoqualmie River Bridge replacement. | Completed in 2005 on Forest Road 58 at M.P. 2 in Section 8, T22N, and R11E. | Within the South Fork Snoqualmie River drainage; replaced an existing bridge, no changes to grizzly bear core habitat. ~ 10.5 air miles SE of project. |
| Denny Creek Salvage. | A windstorm in 2006 blew down approx. 50mbf of second growth trees between the Denny Creek road and west bound I-90. Possible salvage in 2008. | Within the South Fork Snoqualmie River drainage; salvage not in grizzly core habitat; all second growth and would not remove old growth. Effects would not combine. Located ~ 10.5 air miles S of the project. |
| Washington State Dept. of Transportation rock | Continued reissuance of permit to stockpile sand for | Within the South Fork Snoqualmie River drainage; |

| Project | Comments | Rational for not being considered |
|--|--|--|
| stockpile site, permit reissuance. | sanding I-90 in the winter. | cleared area and site already exist and have been used for many years. Administrative action only, no new ground disturbance. Located ~ 10.0 air miles S of the project. |
| Marenakos Landscape Rock Permit | Special Use Permit to remove rock adjacent to road 9031. | Within the South Fork Snoqualmie River drainage; This project is too far away and effects would not combine. Located ~ 8.5 air miles from the project area. |
| Several dispersed recreation sites have been closed to vehicular access and lands have been rehabilitated. | From the end of the pavement on DNR lands to the trailheads on both roads 56 and 5640. | This event only affects vehicular access but is not expected to influence trail use patterns since users can still access sites by foot. Extends from approx. 6 miles below to 5 miles above project area. |

Figure 1: Project Locations for Cumulative Effects–Map 1

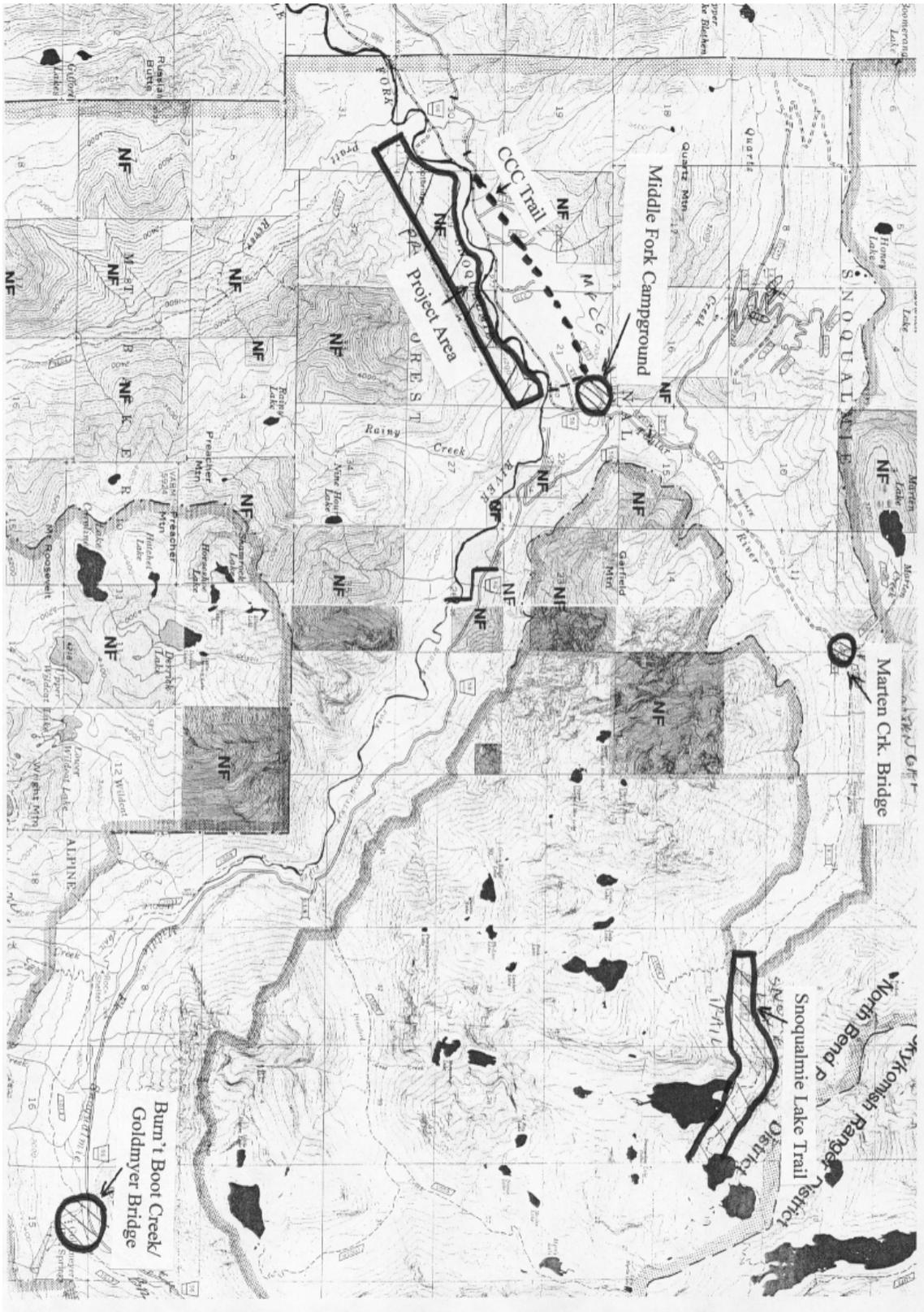
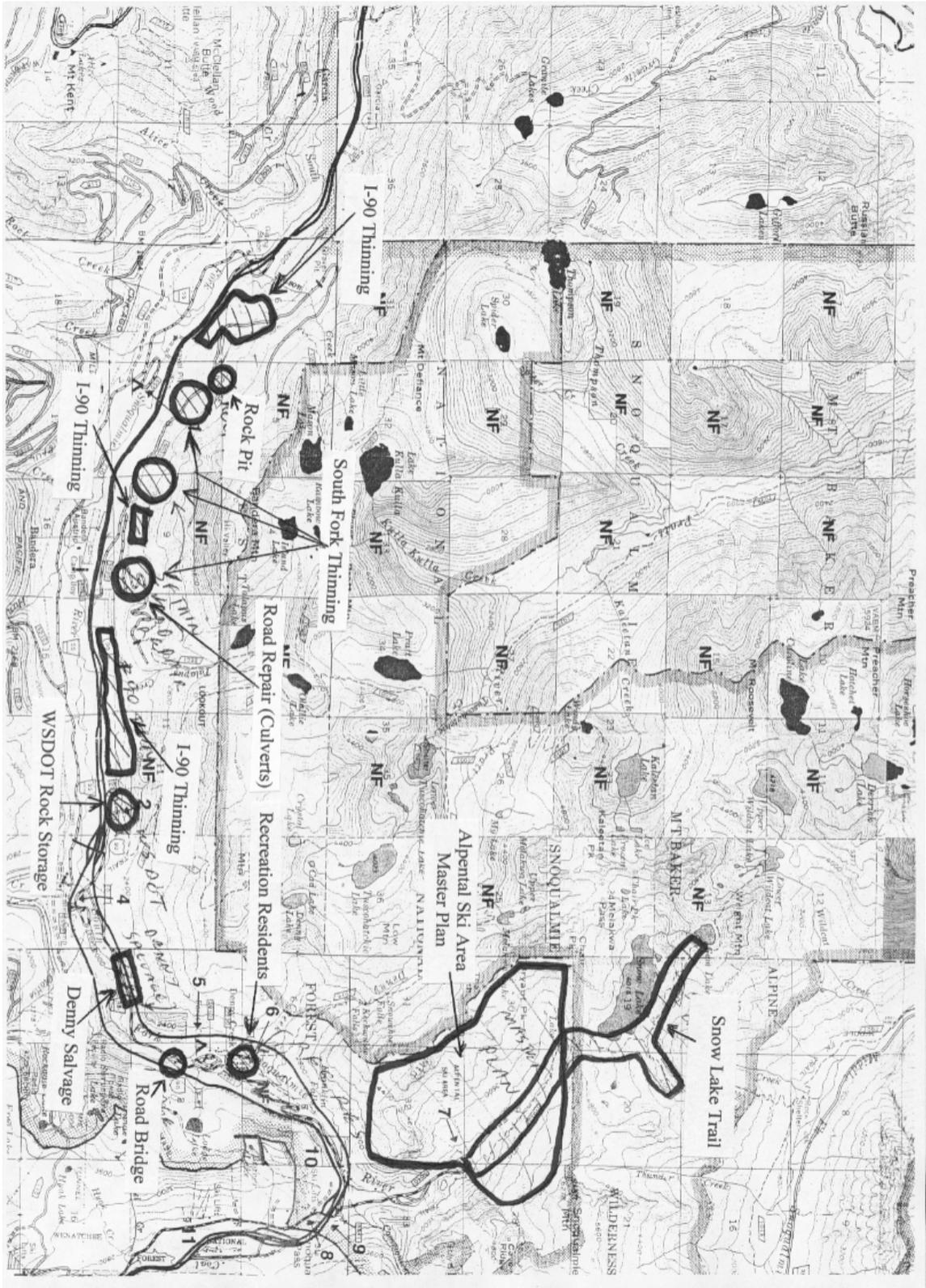


Figure 2: Project Locations for Cumulative Effects–Map 2



Appendix D–Fisheries Conservation Measures

Besides the measures noted in previous reports, these additional conservation measures would minimize effects that the proposed project would have to fisheries resources. The expectation is that these measures would be incorporated into the design and/or contract or otherwise implemented as best management practices.

- All projects potentially affecting the beds or banks of streams, lakes, or other water bodies shall meet all provisions specified in the Memorandum of Understanding with Washington Department of Fish and Wildlife (WDFW) for Hydraulic Projects, including in-water timing periods. For the Middle Fork subwatershed, the timing period is: July 15 through October 31.
- Trails should be located away from stream banks and out of floodplains, where feasible, to retain the largest pieces of downed wood possible in stream channels and floodplains and to minimize the need to buck large riparian trees during trail-clearing activities.
- Old trail sections shall be treated to prevent further human/stock use from occurring, and rehabilitated as needed.
- Use of treated wood shall follow best management practices for treated wood in western aquatic environments (WWPI 2000).
- Disturbed ground where runoff has the potential to drain into stream channels shall be revegetated or protected from surface erosion by seeding, mulching, or other methods prior to the fall rainy season. Any straw or mulch should be weed-free, and the appropriate seed mix should be used, consistent with USDA FS, 2005.
- To retain the largest pieces of downed wood possible in stream channels and floodplains, bucking of large riparian trees during trail-clearing activities shall be restricted to only those trees that must be cut.
- To help educate the recreational users about the effects of rock dams on fish and their legality, Washington Department of Fish and Wildlife signs addressing this issue should be posted at the Middle Fork Snoqualmie Campground and at or along the designated spur trails leading to the river.
- If blasting is needed, effects to fish from in-water vibrations should be minimized by the following:
 - Avoiding surface charges to minimize potential addition of blasted materials to fish-bearing waters.
 - Dividing charges and separating them with appropriate lengths of detonation cord to achieve delays of approximately 50 milliseconds between the divided charges (between 25-100msec, with a target of 50msec).
 - Using the Mt. Baker-Snoqualmie National Forest blasting guidelines, attempt to not exceed the potentially lethal distance and charge weight(s).

Figure 3: Mount Baker–Snoqualmie National Forest Blasting Guidelines for Protection of Fish Guidelines

The following guidelines were agreed to at Aquatic Level 1 Team meeting on January 31, 2007 by USFWS (Marc Whisler, Joe Hiss) and NMFS (Joel Moribe).

- Minimum setback distance from streams for a given charge weight to
1. Keep fish safe and guarantee an NLAA call for the concussive effects of the blast, or
 2. Potentially harm fish but not kill them (Alaska Guidelines; Alaska Department of Fish and Game. 1995).

Rationale for Blasting Standards (11 AAC 95) Developed to Prevent Explosive Injury to Fish. 37pp)

NOTE: Guidelines do not apply to areas/seasons when eggs are in the gravel nor to any other aspects of a project other than blasting. Guidelines may be modified as more information becomes available.

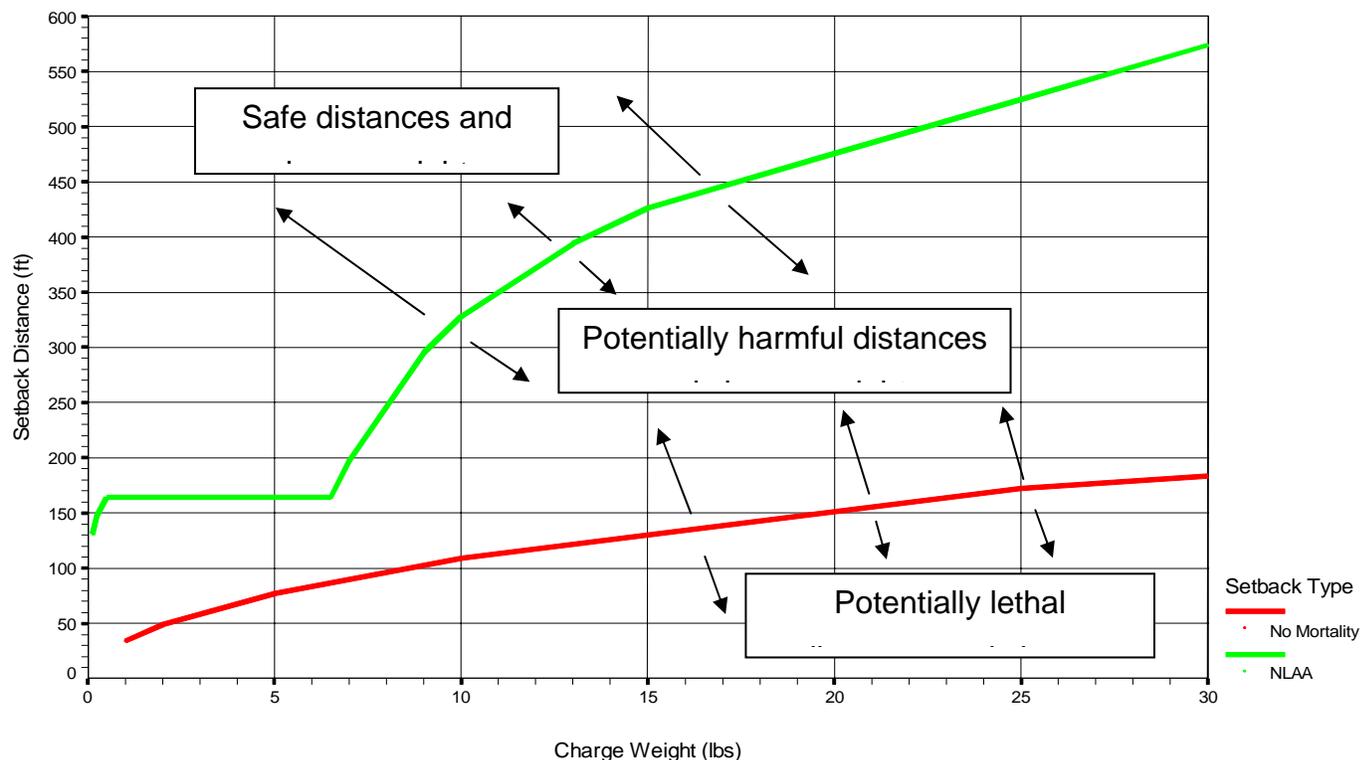


Table 4: NLAA Setback and No Mortality Setback Tables

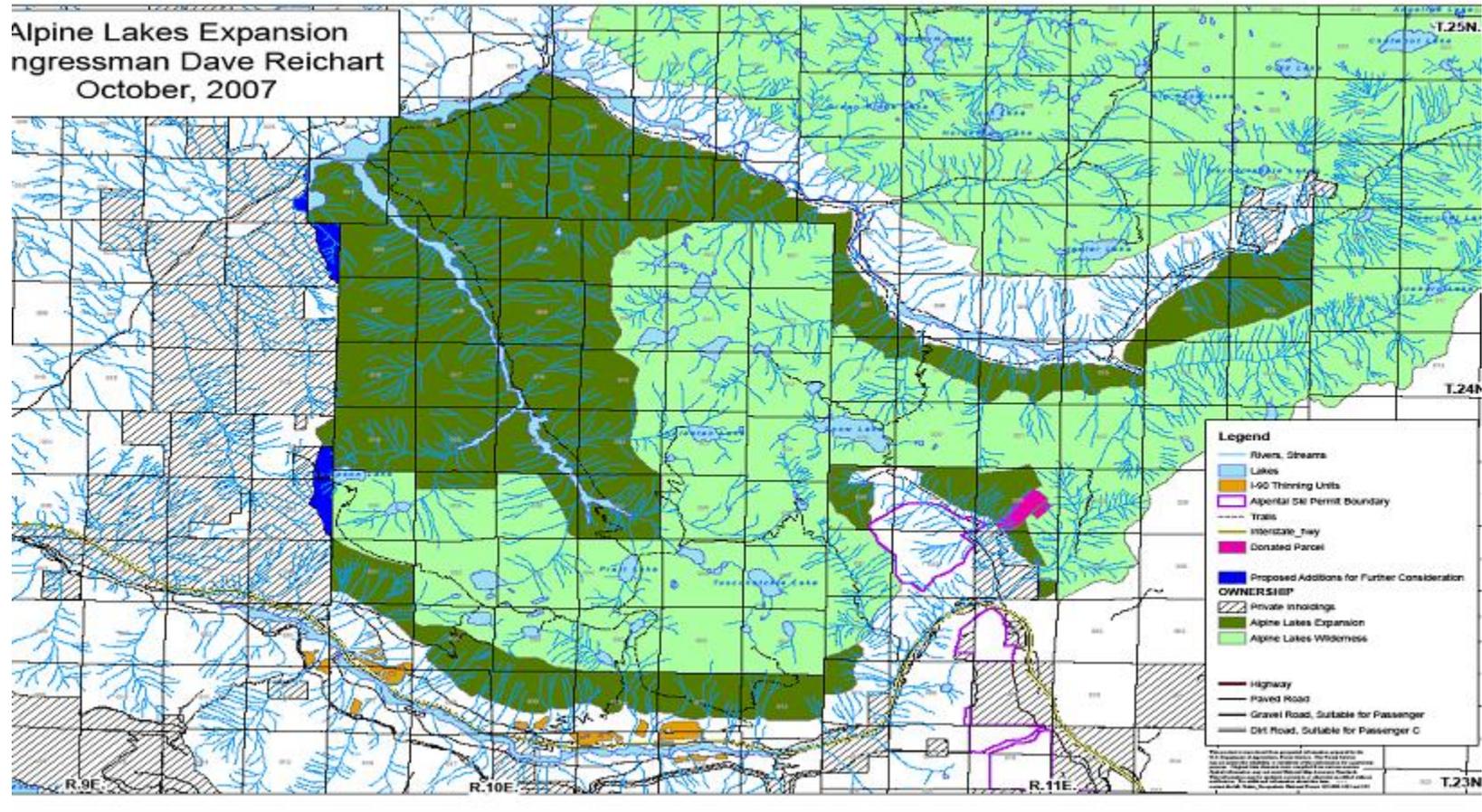
Note: Alaska Guidelines for specific substrate and valley bottom configuration can be used to determine more precise distances if blasts are close to the potentially lethal effects line for rock.

| NLAA Setback (minimum safe distance by charge weight) | | |
|--|---------------------|----------------------|
| Charge Weight(lbs) | Distance (m) | Distance (ft) |
| 0.125 | 40 | 131 |
| 0.25 | 45 | 148 |
| 0.5 | 50 | 164 |
| 6.5 | 50 | 164 |
| 7 | 60 | 197 |
| 8 | 75 | 246 |
| 9 | 90 | 295 |
| 10 | 100 | 328 |
| 13 | 120 | 394 |
| 15 | 130 | 426 |
| 20 | 145 | 476 |
| 25 | 160 | 525 |
| 30 | 175 | 574 |

| “No Mortality” Setback Alaska Guidelines for Rock (minimum distance to prevent mortality by charge weight) | | |
|---|---------------------|----------------------|
| Charge Weight (lbs) | Distance (m) | Distance (ft) |
| 1 | 10 | 34 |
| 2 | 15 | 49 |
| 5 | 23 | 77 |
| 10 | 33 | 109 |
| 25 | 52 | 172 |
| 100 | 103 | 344 |

Appendix E–Proposed Wilderness Expansion Map

Figure 4: Map of Proposed Wilderness Area



Appendix F–Forest Plan Consistency

Land Allocations

Land allocations within the 1994 Record of Decision, amend those allocations described in the 1990 Forest Plan. There is considerable overlap among some allocations; more than one set of standards and guidelines may apply. In addition, where the standards and guidelines of the 1990 Forest Plan are more restrictive or provide greater benefits to late-successional forest-related species than do those of the 1994 ROD, the existing standards and guidelines apply.

The Lower Pratt River Trail project is within the following land allocations:

| LSR ¹ | 5A_ Recommended Recreation ² River | 27 – Alpine Lakes Management Area (Management Intensity Scenic Forest) | Riparian Reserve |
|------------------|---|--|--|
| The Entire Trail | The Entire Trail | The Entire Trail | The first 1.2 and last 0.35 miles of trail |

The following tables list the applicable standards and guidelines for each allocation:

| LSR | |
|--|--|
| Program Area | Standard and Guideline |
| Management Assessment for Late-Successional Reserve (ROD C-11) | A management assessment should be prepared before habitat manipulation |
| American Indian Uses (ROD C-16) | The exercise of tribal treaty rights... |
| Developments (ROD C-17) | Existing developments... |
| Recreational Uses (ROD C-18) | Dispersed recreational uses... |
| Non-native species (ROD C-19) | In general, non-native species... |
| Protection buffers (ROD C-19) | Protection buffers are additional standards... |

¹ LSR = Late Successional Reserve

² Recreation River under the Wild and Scenic Rivers Act

| 5A – Recommended Recreation River | |
|---|--|
| Program Area | Standard and Guideline |
| A) Recreation | |
| 1) Recreation Planning (MBS page 4-190) | c) Trails may be constructed |
| 2) Visual Quality (MBS page 4-190) | a) See Forest-wide Standards and Guidelines |
| C) Wildlife and Fish | |
| 1) Habitat Improvement (MBS page 4-191) | a) Improvement will be emphasized... |
| F) Water, Soil, Air (MBS page 4-191) | a) Meet Forest Wide Standards and Guidelines |
| H) Rural Community and Human Resources (MBS page 4-191) | a) Meet Forest Wide Standards and Guidelines |
| P) Protection (MBS page 4-191) | |
| 1) Fire Management Planning | a) Forest-wide Fire Protection Group D applies |

| 27 – “Alpine Lakes Management Area” (Management Intensity – Scenic Forest). | |
|--|--|
| Program Area | Standard and Guideline |
| Scenic Forest (as per Alpine Lakes Area Management Plan (MBS page 4-277) | |
| Visual Management Direction (Alpine Lakes Management Plan, Selected Alternative, (ALMP) page 7). | Provide improved opportunities to view natural... (ALMP page 7) |
| | Maintain or enhance scenic quality...(ALMP page 8) |
| | Continue coordination with State Parks...concerning the State Scenic Rivers and Nationwide Rivers inventory programs. Possible addition – Middle Fork Snoqualmie River (ALMP page 8) |

| Riparian Reserves | |
|--|-----------------------------------|
| Program Area | Standard and Guideline |
| Recreation Management (ROD C-34) | |
| RM-1, (ROD C-34) | New recreation facilities... |
| RM-2, (ROD C-34) | Adjust dispersed and developed... |
| Fire and Fuels Management (ROD C-35) | |
| FM-1, (ROD C-35) | Design fuel treatment... |
| General Riparian Area Management (ROD C-37) | |
| RA-1, (ROD C-37) | Identify and attempt... |
| RA-2, (ROD C-37) | Fell trees in riparian... |
| Watershed and Habitat Restoration (ROD C-37) | |
| WR-3, (ROD C-37) | Do not use mitigation... |

With the potential for the Pratt River drainage to be included in the Alpine Lakes Wilderness, management standards and guidelines would probably change. Currently, the Pratt River is under management area prescription 5A–Recommended Recreation River however, if it is included in the wilderness, the management area prescription would change to standard and guidelines under 5C–Recommended Wild River. These applicable standards and guidelines are listed in the following table: (Note: these standards and guidelines apply to the Pratt River only, not the Middle Fork Snoqualmie River).

| 5C – Recommended Wild River | |
|--|---|
| Program Area | Standard and Guideline |
| A) Recreation | |
| 1) Recreation Planning (MBS page 4-194) | c) As a minimum, direction covering the semi-primitive... |
| | d) Trails may be developed but must be located... |
| 2) Visual Quality (MBS page 4-194) | a) See Forest-wide Standards and Guidelines |
| 3) American Indian Religious and Cultural Uses MBS page 4-194) | a) Meet Forest-wide Standards and Guidelines |
| C) Wildlife and Fish | |
| 1) Habitat Improvement (MBS page 4-195) | a) Structural habitat improvements allow... |
| F) Water, Soil, Air (MBS page 4-195) | a) Meet Forest Wide Standards and Guidelines |
| H) Rural Community and Human Resources (MBS page 4-195) | a) Meet Forest Wide Standards and Guidelines |
| P) Protection (MBS page 4-196) | |
| 1) Fire Management Planning | a) Forest-wide Fire Protection Group D applies |

This entire trail project is within a Tier 2 watershed. A Tier 2 watershed is not a land allocation but there are standards and guidelines that do apply. The applicable standards and guidelines are as follows:

Key watersheds are highest priority for watershed restoration (Forest Plan page C-7)

Watershed analysis is required prior to management activities, except minor activities. . (Forest Plan page C-7)

The following narratives list the applicable standards and guidelines for the Lower Pratt River Trail reconstruction/relocation along with a discussion of consistency. If the project is not consistent, then a discussion follows that addresses if the project can be made consistent with the forest plan.

LSR

Management Assessment for Late-Successional Reserves (ROD C-11) –A management assessment should be prepared for each large Late-Successional Reserve (or group of smaller Late-Successional Reserves) before habitat manipulation activities are designed and implemented.

A Forest-Wide Late Successional Reserve Assessment has been prepared and reviewed for sufficiency by the Regional Ecosystem Office (REO), (September 2001). The Lower Pratt River Trail project is within LSR 122 (Assessment pages 6 and 46) which is a 16,734 acre reserve. Further, the beginning 0.10 miles of the trail are in LSOG 22f.

The LSR Assessment states: “In general, ROD standards and guidelines for salvage and for multiple use activities other than silviculture (ROD – pages C-16 to C-19) will be followed. Most of the LSR’s contain existing developments such as campgrounds and trails. These existing developments may remain, consistent with other standards and guidelines (ROD – page C-17). The maintenance of existing trails and other dispersed or developed sites is not expected to reduce the functioning of LSR’s. Routine maintenance includes minor reconstruction or minor rerouting of trails needed to reduce resource damage (LSR Assessment page 77).”

This project is consistent with this standard and guideline because it is an existing trail, segments are being reconstructed, and segments are being rerouted to reduce resource damage and no new developments are being proposed.

American Indian Uses (ROD C-16) – The exercise of tribal treaty rights will not be restricted by these standards and guidelines unless the Regional Interagency Committee determines that the restriction is....

There are laws, regulations, and ordinances governing use of National Forest Lands that all persons are to abide by. With Alternatives 2 and 3, there are no proposals that would change or add to any of these current restrictions thus, tribal treaty rights would not be restricted by this project other than what already exists. Thus, the proposed trail reconstruction/relocation is consistent with this standard and guideline.

Developments (ROD C-17) – Existing developments un LSR such as campgrounds, recreation residents, ski areas, utility corridors , and electronic sites are considered existing uses...and may be consistent with other standards and guidelines.

Most of the LSR’s contain existing developments such as campgrounds and trails. These existing developments may remain, consistent with other standards and guidelines (ROD – page C-17). The maintenance of existing trails and other dispersed or developed sites is not expected to reduce the functioning of LSR’s. Routine maintenance includes minor reconstruction or minor rerouting of trails needed to reduce resource damage (LSR Assessment page 77).”

This project is consistent with this standard and guideline because it is an existing trail, segments are being reconstructed, and segments are being rerouted to reduce resource damage and no new developments are being proposed.

Recreational Uses (ROD C-18) – Dispersed recreational uses, including hunting and fishing, generally are consistent with the objectives of the LSR. Use adjustment measures such as education, use limitations, traffic control devices, or increased maintenance when dispersed and developed recreation practices retard or prevent attainment of LSR objectives.

This project is consistent with this standard and guideline because it is an existing trail and use would be limited to either hiker only or hiker/stock, bikes would be prohibited. Segments are being reconstructed, and segments are being rerouted to reduce resource damage and no new developments are being proposed.

Non-Native Species (ROD C-19) – In general nonnative species (plant and animal) should not be introduced into LSR. If an introduction of nonnative species is proposed, complete an assessment of impacts.

This project is consistent with this standard and guideline because any erosion control would be completed with locally collected native species or those desirable non-natives recommended for use on the Forest (Potash and Aubry 1997).

Protection Buffers (ROD C-19) – Protection buffers are additional standards and guidelines from the Scientific Analysis Team Report for specific rare and locally endemic species, and other species in the upland forest matrix.

This project is consistent with this standard and guideline because there would no effect on Federally Endangered or Threatened plant species because none of these species are present within the project area nor would there is an affect on Mollusks and Salamanders and other species.

5A–Recommended Recreation River:

Recreation Planning (MBS page 4-190) – Trails may be constructed.

This proposed project would reconstruct/relocate an existing trail; no new trails are proposed.

Visual Quality (MBS page 4-190) – (Meet Forest Wide Standards and Guidelines). Within ¼ mile of the Pratt River (Foreground), the visual resource objective is “Partial Retention.” Beyond the Foreground the classification is “Partial Retention” (MBS page 4-93).

The definition of partial retention is: “Human activity may be evident, but must remain subordinate to the characteristic landscape” (MBS Glossary page 44). This project is consistent with this standard and guideline because other than maintaining the existing trail, no other developments are proposed. Other than standing adjacent to the trail, evidence of human activity is not evident.

Habitat Improvement (MBS page 4-191) – Improvement will be emphasized such as desirable forage species planting, fertilization, thinning, and slash disposal.

This project is consistent with this standard and guideline because user built trails would be rehabilitated and vegetation would be allowed to grow.

Water, Soil, Air (MBS page 4-191) – (Meet Forest Wide Standards and Guidelines).

Soil

(Forest Plan, page 4-117) Surface erosion will be minimized by maintaining effective ground cover after cessation of any soil disturbing activity.

(Forest Plan, page 4-117) Plan and accomplish rehabilitation projects as necessary to meet soil and water objectives and standards.

(Forest Plan, page 4-118) Utilize soil surveys and/or soil scientists in project planning work that involves activities that affect or are affected by the soil resource.

Air

(Forest Plan, page 4-118) The Forest Service will comply with all applicable air quality laws and regulations, and coordinate with appropriate air quality regulatory agencies.

Water (MBS page 4-118):

The standards and guidelines for riparian reserves are more stringent than those listed in the Forest Plan (Refer to Riparian Reserve discussion below).

This project is consistent with these standards and guidelines because, for soils, a soil scientist was involved in the planning and design of the project. Further, user built trails would be rehabilitated for the purpose of re-growing vegetation and reducing the potential for surface soil erosion within a riparian reserve.

Other than possibly using motorized equipment, there would be no affect to the air in the project area because there are no plans for burning or utilizing other pollution producing methods or devices.

Rural Community and Human Resources (MBS page 4-191) – (Meet Forest Wide Standards and Guidelines).

(Forest Plan, page 4-96) The Forest Service will participate in human resource programs that support community and economic development.

Implementation of either Alternative 2 or 3 would have no disproportionately high or adverse effects to low income or minority populations.

Fire Management Planning (MBS page 4-191) – Forest-wide Fire Protection Group D applies (MBS page 4-146).

Prescribed fire is not planned for this project. Other constraints listed in the Forest Plan would be implemented if a wildfire were to begin in the project area.

27–Alpine Lakes Management Area (Management Intensity – Scenic Forest)

(Alpine Lakes management Plan page 7): Provide improved opportunities to view natural appearing landscapes in the area by both vehicles and primitive means.

(Alpine Lakes management Plan page 8): Maintain or enhance scenic quality consistent with the requirements of “primitive” and semi-primitive non-motorized” recreation and special areas.

(Alpine Lakes management Plan page 8): Continue coordination with State Parks...concerning the State Scenic Rivers and Nationwide Rivers inventory programs; Possible addition – Middle Fork Snoqualmie River.

This project is consistent with these standards and guidelines because an existing trail would be improved that would provide improved viewing opportunities by hiking (primitive means). Further, other than when standing within the actual clearing, this trail cannot be seen from the Middle Fork Road or from viewpoints within the wilderness due to topographic location and vegetative screening. The scenic value of the Middle Fork Snoqualmie River would not be affected because the trail would not be seen from view points along the Middle Fork road or from view points along the Middle Fork Snoqualmie River.

If the Pratt River drainage is included in the Alpine Lakes Wilderness, the legislation would include converting the river from “Recreation” to “Wild” under the Wild and Scenic Rivers Act. If this occurs, the following standards and guidelines would apply and would replace the land allocation 5A.

5C – American Indian Religious and Cultural Use; Meet Forest – Wide Standards and Guidelines (MBS page 4-194)

The standards and guidelines are not specific to restricting use but rather maintaining cultural inventories, protecting known cultural sites, and confidentiality of known cultural sites (MBS 4-97).

(Forest Plan, page 4-97) Item 3: Identify specific sites and areas according to the nature of the religious use or ceremonial practice.

The Forest Service has ongoing consultation with the associated tribes to identify traditional cultural values, Tribal use areas, and plant gathering areas, spiritual places, and religious sites. The Forest Service will ensure that Tribal values are considered and traditional use areas are identified and considered. The proposed trail reconstruction/relocation is consistent with this standard and guideline because consultation with the local tribes is on-going. As a result,

information about planned project activities have been and will continue to be presented to the appropriate Tribal groups for coordination concerning effects on these sites. The District Ranger of the Snoqualmie Ranger District has met with a representative of the Snoqualmie Tribe and has discussed this project with that representative.

(Forest Plan, page 4-97) Item 5: Review the “Inventory of American Indian Religious and Cultural use, practices, localities, and resources” during the scoping phase of environmental analysis.

Scoping for this project was completed twice and though the Snoqualmie tribe did show interest, there was no exchange of new information related to this inventory. Thus, this project is consistent with this standard and guideline.

(Forest Plan, page 4-97) Item 6: Present information about planned project activities in all management areas (i.e. protected and otherwise) to religious and political leaders of tribal groups whose traditional practices might be affected.

Scoping for this project was completed twice and though the Snoqualmie tribe did show interest, there was no exchange of new information and no new sites were located on the ground during cultural resource surveys. Thus, this project is consistent with this standard and guideline.

(Forest Plan, page 4-98) Item 2: A professionally supervised cultural resource inventory program will be conducted, on a project specific level, for all activities which might affect resources eligible for the National Register of historic Places, including land exchanges and facility maintenance. Thus, this project is consistent with this standard and guideline.

Surveys for the project have been completed for the purpose of determining eligibility for the National Register. Further, field surveys were completed to determine if any cultural resources were present. No archaeological resources that have been found are eligible for the National Register. Thus, this project is consistent with this standard and guideline.

(Forest Plan, page 4-98) Item 4: Results of project level cultural resource inventories shall be documented through environmental analysis for the project. Cultural resource compliance shall be documented according to the current Programmatic Agreement between the Washington State Historic Preservation Office (SHPO) and the Forest Service, Region 6.

Surveys were completed for the project and all data was submitted to SHPO. No archaeological resources that have been found are eligible for the National Register. Thus, this project is consistent with this standard and guideline.

(Forest Plan, page 4-98) Item 1: Evaluate the significance of inventoried sites applying the criteria for eligibility to the National Register of Historic Places. No archaeological resources that have been found are eligible for the National Register. Thus, this project is consistent with this standard and guideline.

Riparian Reserves

RM-1 (ROD C-34) – For existing recreation facilities within Riparian Reserves, evaluate and mitigate impact to ensure that these do not prevent, and to the extent practicable contribute to, attainment of Aquatic Conservation Strategy objectives.

This project is consistent because it does not prevent attainment of the ACS objectives (Refer to Appendix B page 111 of this document).

RM-2 (ROD C-34) – Adjust dispersed and developed recreation practices that retard or prevent attainment of Aquatic Conservation Strategy objectives. Where adjustment measures such as education use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures are not effective, eliminate the practice or occupancy.

This project is consistent because it does not prevent attainment of the ACS objectives (Refer to Appendix B page 111 of this document). Further, use would be limited so that bikes and other wheeled devices cannot be used on this segment of trail.

FM-1 (ROD C-35) – Design fuel treatment and fire suppression strategies, practices, and activities to meet ACS objectives, and to minimize disturbance of riparian ground cover and vegetation.

This project is consistent because fuel treatment consists of disposing of slash by lop and scatter and not by burning. Further, this project is consistent because it does not prevent attainment of the ACS objectives (Refer to Appendix B page 111 of this document).

RA-1 (ROD C-37) – Identify and attempt to secure in-stream flows needed to maintain riparian resources, channel conditions, and aquatic habitat.

This project is consistent because the majority of the trail is being moved out of the Riparian Reserve for the Middle Fork Snoqualmie River and user built trails are being rehabilitated so that vegetation can re-grow and the potential for erosion reduced. This would aid in maintaining riparian resources.

RA-2 (ROD C-37) – Fell trees in Riparian Reserves when they pose a safety risk. Keep felled trees on-site when needed to meet coarse woody debris objectives.

This project is consistent because if trees are felled in Riparian Reserves, they would be left in place. The only reason a tree would be felled is if it posed a risk to public safety or was that threat to an improvement such as a trail bridge.

WR-3 (ROD C-37) – Do not use mitigation or planned restoration as a substitute for preventing habitat degradation.

This project is consistent because project activities would move the majority of the trail out of Riparian Reserves and user built trails would be rehabilitated thus allowing habitat to re-grow.

Appendix G-Glossary and Common Terms

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| Activity center | The core of an owl's territory and the focal point of protection measures. Most frequently located in or near the highest concentration of remaining suitable habitat. |
| Aggradation | Deposition in one place of material eroded from another. Aggradation raises the elevation of streambeds, flood plains, and the bottom of other water bodies. |
| Alluvial fan | A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes, shaped like an open fan or a segment of a cone, deposited by a stream at the place where it issues from a narrow mountain valley upon a plain or broad valley, or where a tributary stream is at its junction with the main stream. It is steepest near the mouth of the valley where its apex points upstream. Moreover, it slopes gently and convexly outward with decreasing gradient. |
| Alluvial | Originate through the transport and deposition from running water. |
| Anadromous fish | Fish that are hatched and rear in freshwater, move to the ocean to grow and mature, and return to freshwater to reproduce. Salmon and steelhead are examples. |
| Base Rate | The minimum acceptable bid rate per hundred cubic feet of timber. |
| Benefit cost ratio | A measure of economic efficiency computed by dividing total discounted primary benefits by total discounted economic costs. |
| Bole | Trunk of the tree |
| Bryophyte | Collectively mosses, liverworts, and hornworts. |
| Carrying capacity | The maximum number of organisms that can be supported in a given area of habitat at a given time. |
| Cataloging unit | The Forest Service has added two additional levels of finer resolution. The structures for these levels are called the Watershed and Subwatershed. The Fifth Field Watershed is the fifth of these resolutions, or the "Watershed." |
| Closed road | A road that remains part of the transportation system, but motorized use has been eliminated, prohibited, or restricted during all or certain times of the year. |
| Concern species | Species whose populations are of concern to biologists on the Mt. Baker-Snoqualmie National Forest. An informal designation. |
| Critical habitat | (Endangered Species Act) defined as an area occupied by a species listed as threatened or endangered within which are found physical or geographical features essential to the conservation of the species, or an area not currently occupied by the species, which is itself essential to the conservation of the species. As defined in the ESA "conservation" means any and all methods and procedures, and the use of those, needed to bring a species to recovery—the point at which the protections of the ESA are no longer needed. |
| Cumulative effect | The effect on the environment that results from the incremental effect of the action, when added to the effects of other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes the other actions and regardless of land ownership on which the other actions occur. An individual action when considered alone may not have a significant effect, but when its effects are considered in sum with the effects of other past, present, and reasonably foreseeable future actions, the effects may be significant. They can occur when small, incremental amounts of habitat are lost over time through a variety of management activities across a landscape. |
| Debris avalanche | A rapid moving mass of rock fragments, soil, and mud of various sizes not reaching a stream channel. |

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| Debris fans | A gently sloping fan shaped mass of detritus formed as a result of upslope or upstream erosional events. |
| Debris flow | A rapid moving mass of rock fragments, soil, and mud with more than half the particles being larger than sand size. |
| Debris flows | Lahar, a flowing mixture of water-saturated rock debris that forms on the slopes of a volcano, and moves downslope under the force of gravity, sometimes referred to as a mudflow. |
| Decommissioned road | On the MBSNF, a road that no longer is serving a current or planned future access need and has been removed from the transportation system maps and database. The ground occupied by the road corridor is managed according to the land allocation in which it is located. |
| Deficit timber Sale | Deficit sales are timber sales where the average indicated advertised rate is less than the average base rate. |
| Degradation | Erosional removal of materials from one place to another. Degradation lowers the elevation of streambeds and floodplains. |
| Depressed stock | A stock of fish whose production is below expected levels based on available habitat and natural variations in survival rates, but above the level where permanent damage to the stock is likely. |
| Discharge | Volume of water flowing past reference point per unit time (usually expressed as cubic meter/second). |
| Early seral (Regional Ecological Assessment Program [REAP]) | An ecological age class designation. Early successional condition with open canopy generally with less than 60 percent overstory tree cover and less than 2 inches mean diameter breast height. Vegetation is typically some combination of graminoids, forbs, and shrubs, and can have tree seedlings or saplings. |
| Early seral (Terrestrial Vertebrate Habitat Condition Mode [TVHCM]) | A structural or size-class designation referring to sparsely vegetated, non-forest stands with 60–90 percent bare ground, including grass-forb, shrub, open sap-pole, and sparse vegetation. These stands may be included in early, mid, or late seral as defined in the REAP. |
| Economic efficiency analysis | This analysis uses the cost and revenue estimates included in the financial efficiency analysis, and adds other economic costs and benefits that are not part of Forest Service monetary transactions. |
| Ecosystem management | A land management system that strives to maintain the natural processes and balances as well as provide for human use |
| Ecotone | Edge habitat. For the purpose of this analysis, the area within 400 feet of the edge between mid/late seral forested stands and early seral of non-forested stands. |
| Endangered species | A native species found by the Secretary of the Interior to be threatened with extinction. |
| Escapement | Those fish that have survived all fisheries and will make up a spawning population. |
| Ethnographer | One who studies or is proficient in ethnography, which is the branch of anthropology that considers man geographically and descriptively, treating of the subdivision of races, the causes of migration etc. |
| Expected bid rate | The expected bid rate per hundred cubic feet of timber. The expected bid rate is estimated through the Forest Service timber sale appraisal system. |
| Extirpated | Eliminated from a local area. |
| Fifth field watershed | A hierarchical catalog system designed by the US Geological Survey and the Water Resource Council comprised of Region, Subregion, Accounting Unit, and |
| Financial efficiency analysis | This analysis provides a comparison of anticipated costs and revenues that are part of Forest Service monetary transactions. |

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| Fine (light) fuels | Fast-drying fuels, generally with a comparatively high surface area-to-volume ratio, which are less than 1/4-inch in diameter and have a time lag of one hour or less. These fuels readily ignite and are rapidly consumed by fire when dry. |
| Fire handline | Site preparation associated with managed wildland fire and prescribed fire (hand line, snagging, mop-up) |
| Fire intensity level (FIL) | Fire Intensity Level are an expression of fireline intensity, based on typical and/or calculated flame length of a fire behavior condition. FILs are used in the analysis to reflect the differences in difficulty of suppression and fire effects on natural and cultural resources. |
| Flame length | The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface); an indicator of fire intensity. |
| Floodplain | Level lowland bordering a stream onto which the stream spreads at flood stage. |
| Fragmentation | The degree to which the landscape is broken into distinct patch types. |
| Fuel Bed | An array of fuels usually constructed with specific loading, depth and particle size to meet experimental requirements; also, commonly used to describe the fuel composition in natural settings. |
| Fuel Model | Simulated fuel complex (or combination of vegetation types) for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified. |
| Fuel | Combustible material. Includes, vegetation, such as grass, leaves, ground litter, plants, shrubs and trees that feed a fire. (See Surface Fuels.) |
| Girdle | The process of completely removing a strip of bark and cambium around a tree's outer circumference, causing its death. |
| Guild | A group of species aggregated together based on similarities in habitat requirements and anticipated response to changes in landscape conditions. |
| Habitat conservation area (HCA) | Part of a network of habitat proposed by the Interagency Scientific committee to protect spotted owls. A contiguous block of habitat to be managed and conserved for breeding spotted owl pairs, connectivity, and distribution of owls. Has been replaced by late successional reserves as the working management unit for protecting spotted owl habitat. |
| Healthy stock | A stock of fish experiencing production levels consistent with its available habitat and within the natural variations in survival for the stock. |
| Hibernacula | Sites where hibernation occurs. |
| Human influence zone | Areas of human activity (recreation sites, roads, trails, buildings, mines, hydropower operations, etc.) buffered by one-fourth mile around trails and one-half mile around roads and other sites. |
| Initial attack | The actions taken by the first resources to arrive at a wildfire to protect lives and property, and prevent further extension of the fire. |
| Inner gorge | Consists of steep (50 percent or greater), continuous slopes immediately above a channel. |
| K-V funds | Knutson-Vandenberg Act. <u>Federal law</u> that allows the US <u>Forest Service</u> to collect <u>money</u> from a <u>timber</u> sale for <u>resource enhancement</u> , <u>protection</u> , and <u>improvement work</u> in the <u>timber</u> sale vicinity. |
| Landslide | Any sudden movement of earth and rocks down a steep slope. |
| Large woody debris | Pieces of wood larger than 10 feet long and 6 inches in diameter located within a stream channel. |
| Late seral (REAP) | An age class designation. Late successional condition with a single or multiple |

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| | canopy structure, including mature, large sawtimber, and old-growth stands. |
| Late seral (TVHCM) | A structural or size-class designation referring to mature or old-growth stands. These stands roughly correspond to the late seral forested stands as defined in the REAP. |
| Late-successional forest | Late-successional forests are those forest seral stages that include mature and old-growth age classes. (ROD USDA-USDI, Standards and Guidelines 1994, B-1) |
| Lava flows | Stream of molten rock that erupts relatively nonexplosively from a volcano and moves slowly downslope. |
| Lichen | A fungus and its photosynthetic partner growing together in a mutually controlled, symbiotic relationship. |
| Live fuels | Living plants, such as trees, grasses, and shrubs, in which the seasonal moisture content cycle is controlled largely by internal physiological mechanisms, rather than by external weather influences. |
| Maximum modification | Visual Quality Objective where management activities are dominant, but appear natural when seen as background. |
| Mid-seral (REAP) | An age class designation. Mid successional condition. Defined in FEMAT as that period in the life of a forest between crown closure and first merchantability. |
| Mid-seral (TVHCM) | A structural or size-class designation referring to closed sap-pole, open mature, closed immature and residual stands. These stands roughly correspond to the mid seral forested stands as defined in the REAP. |
| Native resident fish | An indigenous stock of fish that has not been substantially impacted by genetic interactions with non-native stocks or by other factors, and is still present in all or part of its original range. |
| Neotropical migrants | Birds that migrate from North America to regions south of the Tropic of Cancer (latitude 23 1/2 degrees north) to winter. |
| Non-native fish | A fish stock that has become established outside of its original range. |
| Noxious weeds | Invasive non-native plant species, some of which are toxic to livestock and/or wildlife as designated by the State Noxious Weed Board under the Washington State Noxious Weed Law RCW 17.10. |
| Omnivore | Animal that feeds on both plants and animals. |
| pH | A measure of the hydrogen ion concentration in a solution. |
| Plant association (PA) | The basic unit of vegetation including all its successional stages; a potential natural plant community of definite floristic composition and uniform appearance. |
| Plant association group (PAG) | Groups of plant associations with similar floristic characteristics. |
| Present net value (PNV) | The difference between the discounted financial revenues and the discounted financial costs. |
| Prime timberland | Land that has soil capable of growing wood at the rate of 85 cubic feet or more/acre/year (at culmination of mean annual increment) in natural stands and is not in urban or built-up land uses or water. |
| Pyroclastic flows | A hot (570–1470 degrees F), dry, fast-moving, and high-density mixture of ash, pumice, rock fragments, and gas formed during explosive eruptions or from the collapse of a lava dome. |
| Pyroclastic surges | Turbulent, low-density cloud of hot rock debris and gases that moves over the ground surface at high speed. Similar to a pyroclastic flow but of much lower density (higher gas to rock ratio). |
| Rate of spread (ROS) | The relative activity of a fire in extending its horizontal dimensions. It is expressed |

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| | as a rate of increase of the total perimeter of the fire, as rate of forward spread of the fire front, or as rate of increase in area, depending on the intended use of the information. Usually it is expressed in chains or acres per hour for a specific period in the fire's history. |
| Release tree | A tree targeted for long term growth by removing most to all of the trees in the immediate surrounding area. |
| Rendezvous sites | Temporary resting sites used for several days at a time by a wolf pack during summer months while pups are developing. |
| Riparian zone | Those terrestrial areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables, and soils that exhibit some wetness characteristics. Normally used to refer to the zone within which plants grow rooted in the water table of these rivers, streams, lakes, ponds, reservoirs, springs, marshes, seeps, bogs, and wet meadows. |
| River mile | Length of the river course extended from salt-water confluence to headwaters. |
| Road maintenance levels | One of five levels assigned based on the maintenance required to provide the desired type of access. |
| Road maintenance level 1 (ML1) | Intermittent service roads managed as closed to vehicular traffic, and kept in storage until the next project access need; the closure period must exceed one year. |
| Road maintenance level 2 (ML2) | Roads open for use by high clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation or other specialized uses. |
| Road maintenance level 3 (ML3) | Roads open and maintained for travel by a prudent driver in a standard passenger car. Roads are typically low speed, single lane with turnouts and spot surfacing. |
| Road maintenance level 4 (ML4) | Roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced; however, some may be single lane. Paved surfaces or dust abatement may be used. |
| Road maintenance level 5 (ML5) | Roads that provide a high degree of user comfort and convenience. These roads are normally double lane and paved, although some may be aggregate surfaced and dust abated. |
| Road decommissioning treatment | Treatment (including obliteration) applied to some roads no longer needed, which if treatment is not performed, present an unacceptable hazard to habitats and watershed condition. It removes those elements of a road and reroute or impede hillslope drainage and present slope stability hazards. |
| Road obliteration | Full physical site restoration that attempts to re-contour slopes with the intent to completely remove the road from the landscape. |
| ROD | Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl. Sometimes known as "The President's Plan," it is the guiding document for doing watershed analysis. |
| Recreation opportunity spectrum | Range of opportunities for recreationists by combining variations of qualities provided by nature (vegetation, landscape, topography, scenery), qualities associated with recreational use (levels, types of use), and conditions provided by management (developments, roads, regulations). Includes Primitive, Semi-primitive Non-motorized, Semi-primitive Motorized, Roaded Natural, Roaded Modified, Rural, Urban, etc. |
| Salmonid | Any member of the taxonomic family Salmonidae, which includes all species of salmon, trout, and char. |

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| Security habitat | Habitat that is outside of human influence zones. |
| Sensitive species | A species that occurs on the Regional Forester's Sensitive Species list (Forest Service Manual 2670). Includes species that are candidates for listing under the Federal Endangered Species Act. |
| Sensitive | (from < http://www.fs.fed.us/r6/sfpnw/issssp/agency-policy >—For Region 6 of the Forest Service, those plant and animal species identified by the Regional Forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density and habitat capability that would reduce a species' existing distribution (FSM 2670.5). |
| Seral | Of or pertaining to the series of stages in the process of ecological succession. |
| Silt | A soil particle between 0.05 and 0.002mm in diameter. |
| Slash | Debris left after logging, pruning, thinning or brush cutting; includes logs, chips, bark, branches, stumps and broken understory trees or brush. |
| Spawn | (from http://dictionary.reference.com/browse/spawn)—to deposit eggs or sperm directly into the water, as fishes |
| Stock status | The current condition of a stock, which may be based on escapement, run size, survival, or fitness level. |
| Stock | (from WDF et al. 1992)—the fish spawning in a particular lake or stream(s) at a particular season, which fish to a substantial degree do not interbreed with any group spawning in a different place, or in the same place at a different season. |
| Suitable habitat | Habitat in which an animal or plant can meet all or some of its life history requirements. |
| Surface fuels | Loose surface litter on the soil surface, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches that have not yet decayed enough to lose their identity; also grasses, forbs, low and medium shrubs, tree seedlings, heavier branchwood, downed logs, and stumps interspersed with or partially replacing the litter. |
| Survey and Manage species (S and M) | Species to be protected through survey and management standards and guidelines on federal lands as identified by the Standards and Guidelines for Management of Habitat for Late-successional and Old-growth Forest and Related Species Within the Range of the Spotted Owl (ROD, Appendix J2). |
| Tephra falls | Materials of all sizes and types that are erupted from a volcano and deposited from the air. |
| Threatened species | A native species likely to become endangered within the foreseeable future. |
| Turbidity | An expression of the optical properties of a sample, which causes light rays to be scattered and absorbed rather than transmitted through the sample. Measured in nephelometric turbidity units (NTUs). |
| Ungulate | Hooved mammal. |
| Vegetation series | A group of habitat types having the same dominant canopy tree species at climax, i.e., western hemlock, silver fir, or mountain hemlock. |
| Vegetation zone | Elevational bands within which a certain vegetation series predominates, e.g., the western hemlock zone occurs between 1,400 and 3,500 feet elevation in the watershed. |
| Wetland | Lands where saturation with water is the major factor in determining soil development and the types of plants that grow there. |

Acronyms

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| WDG | Washington Department of Game | NHPA | National Historic Preservation Act |
| ACS | Aquatic Conservation Strategy | NMFS | National Marine Fisheries Service |
| ATM | Access and travel management | NOAA | National Oceanic and Atmospheric Administration |
| BA | Biological Assessment | NWFP | Northwest Forest Plan |
| BE | Biological Evaluation | NWIFC | Northwest Indian Fisheries Commission |
| BO | Biological Opinion | OG | Old-growth |
| BMP | Best Management Practice | ORV | Off Road Vehicle |
| CCF | One Hundred Cubic Feet | PAG | Plant association group |
| CEQ | Council on Environmental Quality | RM | River Mile |
| CFR | Code of Federal Regulations | RNV | Range of natural variability |
| Cfs | cubic feet per second | ROD | Record of Decision |
| CHU | Critical Habitat Unit | ROS | Recreation Opportunity Spectrum |
| CWA | Clean Water Act | RV | Recreational Vehicle |
| Dbh | Diameter at breast height | RVD | Recreational Vehicle Day |
| DNR | Department of Natural Resources | RVDS | Recreation visitor days |
| DSR | Damage Survey Report | S and M | Survey and Manage |
| DPS | Distinct Population Segment | SHPO | State Historic Preservation Office |
| EA | Environmental Assessment | TES | Threatened, endangered and sensitive species |
| EIS | Environmental Impact Statement | TMDL | Total Maximum Daily Load |
| ERFO | Emergency Relief for Federally Owned Roads | USC. | United States Code |
| ESA | Endangered Species Act | U.S. | United States |
| ESU | Evolutionarily Significant Unit | USACE | United States Army Corp of Engineers |
| FEMA | Federal Emergency Management Agency | USDA | US Forest Service |
| FEIS | Final Environmental Impact Statement | FS | |
| FHA | Federal Highways Administration | USDI | US Department of the Interior |
| FONSI | Finding of No Significant Impact | USFWS | US Fish and Wildlife Service |
| FS | Forest Service | USGS | US Geological Survey |
| GIS | Geographical Information System | WAC | Washington Administrative Code |
| GSI | Genetic Stock Information | WaRIS | Washington Rivers Information System |
| HPA | Hydraulic Project Approval | WDF | Washington Department of Fisheries (now WDFW) |
| HUC | USGS Hydrologic Unit Code | WDFW | Washington State Dept. of Fish and Wildlife |
| IDT | Interdisciplinary Team | WDOE | Washington Department of Ecology |
| LSR | Late Successional Reserve | WDOT | Washington State Department of Transportation |
| LWD | Large woody debris | WDW | Washington Department of Wildlife |
| MA | Management Area | WRIA | Water Resource Inventory Area |
| MBF | Thousand Board Feet | WSA | Watershed Analysis |
| MBS | Mount Baker-Snoqualmie National Forest | WSCC | Washington State Conservation Commission |
| Mgpd | Million gallons per day | WSR | Wild and Scenic River |
| MIS | Management Indicator Species | WWTIT | Western Washington Treaty Indian Tribe |
| ML | Maintenance Level | | |
| MP | Milepost | | |
| NEPA | National Environmental Policy Act NFMA | | |
| NFMA | National Forest Management Act | | |
| NFS | National Forest System | | |