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Chapter 1 - Purpose and Need for Action

Introduction

This environmental assessment analyzes the reconstruction and relocation of approximately 3.25 miles of the Lower Pratt River Trail # 1035 (Refer to Figure 2 on page 11 of this document). This trail is not adequate for full use and enjoyment by the public since maintenance has not occurred since the 1960s. Though this trail is inadequate, it is necessary to provide for public safety and to provide recreation opportunities that the public can fully enjoy. The trail is still viable and listed in the Mt. Baker-Snoqualmie National Forest, Forest Plan. The Lower Pratt River Trail is part of the trail system on the forest that helps in meeting management objectives (Forest Plan, Appendix-E page E-8). The project area is located on the Snoqualmie Ranger District within Sections 21, 22, 28, 29, 30, and 31 T.24 N. R.10 E.WM. This project would reconstruct segments of the original trail, construct segments of new trail, and convert existing logging roads and logging trails to hiking trails. The Pratt River Trail, as it currently exists, is located immediately adjacent to both the Middle Fork Snoqualmie River and the Pratt River however, with the proposed project, the majority of the trail is away from the Middle Fork River and in most cases, out of the Riparian Reserve. Currently, at its closest point, the boundary for the main body of the Alpine Lakes Wilderness is approximately 0.75 air miles northeast of the Middle Fork Trailhead with another smaller segment of the wilderness being approximately three air miles to the southeast of this trail segment.

As noted, the majority of the Lower Pratt River Trail is outside of the Alpine Lakes Wilderness boundary however, on November 8, 2007, the Honorable Dave Reichert introduced Bill HR 4113 “*Alpine Lakes Wilderness Additions and Wild Pratt River Act of 2007*” in the House of Representatives. If this Bill continues and the expansion takes place, all of the Pratt River Watershed is to be included in the wilderness and the Pratt River is to be designated as a “Wild River” (as defined in the Wild and Scenic Rivers Act). Additionally, the Bill would add the parcel of National Forest Land on the south side of the Middle Fork River, between the southern shore of the river and the existing Alpine Lakes Wilderness. This new boundary along the Middle Fork would be setback from the southern shore of the river so that the existing Middle Fork trail is outside the wilderness. On the south side, a contiguous parcel of land extending from the western boundary of the National Forest, eastward to within approximately 1 ½ miles west of the Snoqualmie Pass area and would also be included in the Alpine Lakes Wilderness. This new boundary is setback approximately ¼ mile from the I-90 freeway. Lastly, to be included in the wilderness is a parcel of land north of the Alpentel Ski Area that would include lands around the Bryant Peak and Snoqualmie Mountain area. (Refer to Appendix E of this document).

Additional documentation, including more detailed analysis of the project area¹ resources (specialist’s reports and/or biological evaluations/assessments for recreation, wildlife, fisheries,

¹ For this project, refer to Figure 1 page 6 for the proposed project area.

botany, heritage resources, soils, and public safety), may be found in the Project Record located at the Snoqualmie Ranger District Office in North Bend, Washington. All or these reports are hereby incorporated into this EA by reference.

Historic Perspective and Desired Conditions

History

It is unknown when the trail systems in the Middle Fork and Pratt drainages was initially established however; the earliest copy of a map showing a portion of the Middle Fork trail by Burnt Boot Creek is a 1923 reprint of a 1903 USGS Map² and is on file at the district office. Along with the 1923 reprint, there are two other maps indicating that a trail existed along the Middle Fork Snoqualmie River as well as the Pratt River including a 1930 reprint of a 1923 map along with a 1917 Mountaineers Map (both on file at the district office). Loggers began moving up the Middle Fork Snoqualmie River drainage around 1920 and logged the Middle Fork, Taylor River, and Pratt drainages up into the 1940's (Recreation Report p.1, Analysis File). Many of the trails in the Middle Fork drainage were rebuilt following logging, including the Pratt River trail, the Middle Fork Trail past Goldmyer Hot Springs and beyond, and the Snoqualmie Lake Trail (Refer to current trail maps.) A 1950 edition of a United States Geological Survey (USGS) map indicates that a trail still existed along the Middle Fork Snoqualmie River, following the original route (EA, Analysis File).

The headwaters of the Middle Fork of the Snoqualmie and Pratt Rivers are located in the Alpine Lakes Wilderness. After leaving the headwaters area, the rivers generally flow west out of the wilderness and finally join approximately 3 ½ miles below the confluence of the Middle Fork and Taylor Rivers. Within these drainages, the forest consists of immature, mature, and old growth timber stands that range in age from 18 years old to over 250 years old. The major tree species on the upper ridges include Douglas fir, western hemlock, and western red cedar. In the valleys, the major species are red alder and cottonwood, especially adjacent to riparian areas.

Land management activities in the Middle Fork drainage have occurred since the beginning of the early 20th century. The most obvious activity was "railroad" logging on private and National Forest System lands throughout the Middle Fork drainage and along the Pratt River drainage. Other activities included: 1) The construction of a building called the "half-way" house and described by locals as a "hotel" located on the east side of the Middle Fork Snoqualmie River within the Pratt drainage. 2) Constructing roads and trails allowing access by trucks and cars, mining activities, and private developments at places like the Goldmyer Hot Springs. 3) Constructing roads in the 1980's for allowing logging on private lands as well as logging on National Forest lands.

The Forest Service has built and or maintained several hiking trails along the various river and stream channels in the Middle Fork and tributary drainages however, there are very few that are

² USGS = *United States Geological Survey*

snow free most of the year. In the past, the Forest Service only owned scattered parcels of land throughout the drainage however, through land exchanges the majority of the lands in the drainage are under Forest Service management.

Currently, there is only one developed recreation site in the Middle Fork/Pratt drainages other than a few trailheads. This development is the Middle Fork Campground located in Section 21 T.24 N., R.10 E. Construction of this campground was constructed in calendar year 2004 and 2005 and was open for operations in the summer of 2006. The construction of this campground is consistent with modified Alternative 7 (Alpine Lakes Wilderness Recreation Use EA, Decision Notice 1993). Alternative 7 calls for: "... *high levels of recreation development outside the wilderness...*" (EA page 24).

Low elevation trails that the Forest Service constructed within the Middle Fork and Pratt drainages include:

1. The CCC trail is generally snow free other than approximately 2 weeks out of the year. This trail begins at the Middle Fork Trailhead, extends past the Middle Fork Campground, and then heads NW paralleling Forest Road 56 towards North Bend. This trail is located on the west side of the Middle Fork Snoqualmie River and is not included in the proposed wilderness additions (Refer to Appendix E of this document).
2. The Middle Fork Trail from the Middle Fork Trailhead up to Goldmyer Hot Springs is generally snow free other than approximately 2 months out of the year. This trail is located on the north side of the Middle Fork Snoqualmie River and is not included in the proposed wilderness additions (Refer to Appendix E of this document).
3. There is an interpretive, barrier-free trail adjacent to the Middle Fork Campground and other than approximately 2 months out of the year, this trail is snow free. This trail is located adjacent to the Middle Fork Campground and is not included in the proposed wilderness additions (Refer to Appendix E of this document).
4. Though the Lower Pratt River Trail is inadequate due to the lack of maintenance for several years, the Pratt Trail can provide winter recreation opportunities. This trail does extend from the Middle Fork Trailhead down to the confluence of the Middle Fork and Pratt Rivers, and turns and parallels the Pratt River for about two miles and is generally snow free except for 2 months out of the year. This trail is on the eastern side of the Middle Fork River and would be within the proposed wilderness additions (Refer to Appendix E of this document).

Desired Conditions

The Forest Plan for the Mt. Baker-Snoqualmie National Forest (1990) describes the "Desired Future Condition" for the Alpine Lakes Wilderness as: "*The Recreation Opportunity Spectrum (ROS) concept emphasizes that quality in outdoor recreation can best be achieved by providing a diversity of opportunities consistent with resource limitations to satisfy varying preferences of users. This concept is combined with factors for efficient management and adapted to wilderness in this plan. Wilderness ROS and their standards apply to all designated wilderness on the Forest (for specific direction regarding Alpine Lakes, consult the Alpine Lakes Area Land Management*

Plan)." (Mt. Baker-Snoqualmie National Forest Land and Resource management Plan as amended (LRMP) page 4-207).

On page 4-39 of the LRMP: *"The overall wilderness management goal will be to reduce or eliminate the adverse effects associated with human use, when use approaches or exceeds the established, "Limits of Acceptable Change."*

The LMRP as amended (1990) lists several standards and guidelines for management of the Alpine Lakes Wilderness. As stated in the LRMP: *"If monitoring of on-site conditions indicates that wilderness resource values are being degraded or changed to a point that limits of acceptable change are being closely approached, management actions must be implemented to reverse the declining trend. Recreational visitor activities may be regulated, reduced, or excluded from specific sites or areas. Management actions designed to solve user impact problems will generally be fully implemented before entry quota systems are employed (LRMP page 4-101). Further: "If it becomes necessary to establish priorities for wilderness visitation, highest priority should be given uses which (1) least alter the wilderness environment, and (2) are dependent upon the wilderness environment. Other users should be encouraged to visit areas outside the wilderness" (LRMP page 4-102).*

Under Item 9, Specific policies applicable to the entire forest: *"Special emphasis will be given to identification and planning for trails at elevations where the ground is usually snow free for at least half of the year" (LRMP, Appendix E, page E-4). Further, under Item 13, part b: Priority for use of trail funds will generally be as follows: b) "Reconstruction and relocation of existing trails to protect the resources" (LRMP, Appendix E, page E-5). Additionally, under Item 3, part f "Roaded Management Areas:" "Hiker and interpretive trails should be provided near most large campgrounds to provide for visitor use and enjoyment. Some of these should be suitable for barrier free access" (LRMP, Appendix E, page E-7). Table E-1, LRMP, page E-12 lists all of the system trails on the forest, in numerical order by Ranger District. The segment of Pratt Trail is in Appendix E, LRMP, page E -21.*

After Congress established the Alpine Lakes Wilderness, the Forest Service was directed direction to complete an "Alpine Lakes Area Management Plan" (ALMP) which was completed in November 2, 1981. After completion of the Final Environmental Impact Statement (FEIS) it was known that: *"Proximity to the large metropolitan area makes the Alpine Lakes one of the most popular natural areas in the Northwest. Half of Washington State's population of 3.6 million people is within an hour drive of the area. By the year 2000, that population is expected to increase to over 5 million people" (ALMP summary document, Selected Alternative from the FEIS, page 3). In July of 1993, the Wenatchee and Mt. Baker-Snoqualmie National Forests wrote an environmental assessment (EA) titled "Alpine Lakes Wilderness Recreation Use" (ALRU).*

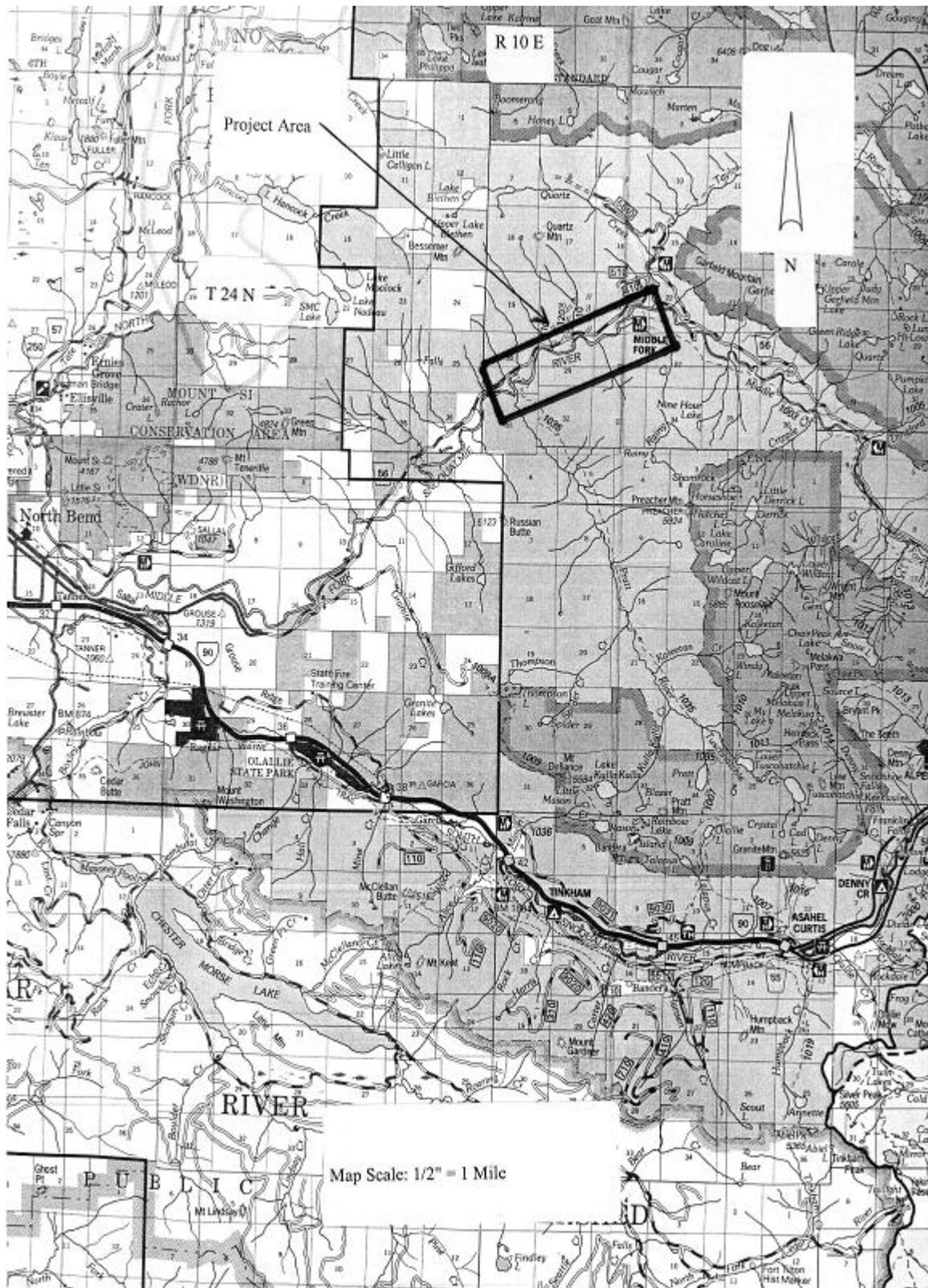
The purpose and need for this EA states: The Alpine Lakes Area Land Management Plan (Alpine Lakes Plan) of 1981 provides specific management standards to ensure the preservation of wilderness character. These standards address protection of the physical and social environment (Appendix 3). The Alpine Lakes Wilderness Recreation Visitor Use Monitoring Report of 1990

(Appendix 4) showed that over 60 percent of the general use and destination areas in the Wilderness are out of compliance with these standards. These sites had: 1) above standard levels of vegetative and soil damage caused by recreational use or 2) above standard levels of social encounters along the trail or in camp.

The purpose of the ALRU (EA) was to bring the Alpine Lakes Wilderness into compliance with the Alpine Lakes Plan management standards for 1) protection of the physical environment, and 2) for providing a sense of solitude. The need derives from concern over damage to vegetation and soils in popular camping and day-use zones in the Wilderness. Solitude is also no longer a part of the wilderness experience at many popular destinations. Increasing recreational use and deteriorating resource conditions necessitate action (ALRU page 3).

Under the “Alpine Lakes Area Management Plan” (ALAMP), the management objective for trails and travel is: “To provide a range of challenges to Wilderness users through a spectrum of access opportunities, including cross-country travel and trails of varying difficulty for horse and foot travel. To minimize physical and visual impacts upon the land, conflicts between users, and concentrations of use harmful to the wilderness resource,” management standards designed to accomplish the objective are established. Under item 3: “*Portions of the Wilderness without trails will be managed to remain trail-less.*” (ALAMP Appendix B, page 160).

Figure 1: Vicinity Map



Need for Action

There is a need for action to reestablish a segment of the Pratt Trail to accomplish two objectives.

1) Provide for public safety and 2) Reconstruct the trail to a standard consistent with the Forest Plan as amended, consistent with the Alpine Lakes Area Land Management Plan of 1981, and consistent with “Alpine Lakes Wilderness Recreation Use” EA of 1993.

Public Safety

Currently, the only adequate trail that accesses the Pratt Valley is via a maintained trail that parallels the Pratt River and comes from the Pratt Lake area. The majority of users that access this trail come from the trailheads along the I-90 corridor. The maintained portion of the trail paralleling the Pratt River ends near the junction of the Middle Fork and Pratt Rivers. Since the 3.25 miles of trail from the Middle Fork Trailhead down to the Pratt River is not adequate, there is no direct access to the Pratt drainage from the Middle Fork road, the Middle Fork Campground, or the Middle Fork Trail located on the south side of the Middle Fork Snoqualmie River. The lack of an adequate trail to provide access is a public safety issue and needs correction.

In the recent past, Search and Rescue (SAR) personnel have been required to search the Pratt drainage in an effort to locate lost hikers, skiers, and snowshoe walkers. Currently one of the only alternatives that SAR has is to hike from I-90 and then tie into the Pratt Trail and hike down the Pratt to the Middle Fork Snoqualmie River. During heavy snows, the upper ridges surrounding this drainage are mostly inaccessible to ground search teams. Further, during the winter months, the Middle Fork is generally too high from runoff and snowmelt to allow safe wading (especially if personnel are carrying heavy survival equipment and wearing heavy winter clothing). The only other option is to follow the adequate portions of the Pratt Trail that is recognizable and then push through the dense brush the remainder of the way to access the bottom of the drainage. These conditions can be unacceptable when situations dictate swift actions that may save lives. Occasionally helicopter searches can be initiated during fair weather but flight may not be possible due to heavy cloud cover and during falling precipitation (i.e. snow, rain, hail, sleet, etc.) making it all the more important for SAR teams to be able to safely access the Pratt drainage. Further, there is a total lack of helicopter landing areas within this drainage due to dense second growth timber stands and heavy brush. This public safety issue is true regardless of the status of the Pratt drainage (wilderness or not).

Further, during the spring and summer months, recreation activity increases dramatically across the Forest and the Middle Fork Snoqualmie drainage is no exception. Access to the Pratt valley from the Middle Fork Road (Road 56) is limited by either wading the Middle Fork Snoqualmie River or as with SAR, users have to follow the portions of the Pratt Trail that can be recognized and then push through the dense brush the remainder of the way to access the bottom of the drainage.

Reconstruct the Trail to Standards

The Alpine Lakes Area Land Management Plan of 1981 (which was incorporated into the 1990 Forest Plan, USDA, 1990 page 1-2)³ called for stewardship to “provide for the protection of the area and the preservation of its wilderness character.” The Alpine Lakes Plan sets standards so that recreational use and acceptable levels of wilderness values can coexist. However, increasing public use has affected the physical and social environment and has required increased management of wilderness resources. A study of Wilderness conditions (1990), found that over 60% of the general use and destination areas in the Wilderness do not meet management standards and recreational use has produced widespread and substantial impacts on the physical and social environment of the Wilderness (Alpine Lakes Wilderness Recreation Use (ALRU), EA, page 1).

Reconstruction of the Pratt Trail would provide for enhanced recreation use by maintaining and improving existing recreation opportunities as well as providing another viable opportunity for hiking within the proposed wilderness area that is not currently available to many Forest users. Providing other recreation opportunities within the proposed wilderness inclusion would be consistent with current land management direction and associated standards and guidelines as determined by the Alpine Lakes Wilderness EIS (1981); The Alpine Lakes Wilderness Recreation Use EA (1993); and the Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan (LRMP) as amended (1990). Specifically, “*Hiker and interpretive trails should be provided near most large campgrounds to provide for visitor use and enjoyment. Some of these should be suitable for barrier free access*” (LRMP, Appendix E, page E-7) and “*The overall wilderness management goal will be to reduce or eliminate the adverse effects associated with human use, when use approaches or exceeds the established, “Limits of Acceptable Change”*” (LRMP page 4-39)

Currently, overuse has affected several areas in the Alpine Lakes Wilderness. The Pratt Trail would provide an additional hiking opportunity within the proposed wilderness area that could take pressure off other areas in the wilderness that are overused. If the Pratt drainage is incorporated into the Alpine Lakes Wilderness, the opportunity to build new access trails for both Search and Rescue missions and providing new trails for reducing impacts in the wilderness would be lost. This is because the Forest Service cannot build new trails within the wilderness, based on the standards described with the ALAMP Appendix B, page 160: “*Portions of the Wilderness without trails will be managed to remain trail-less.*”

³ The regulations (36 CFR 219.2 (b)) guiding the development of Forest Plans state that “if in a particular case, special area authorities require the preparation of a separate special area plan, the direction in any such plan may be incorporated without modification.” For this reason the Alpine Lakes Area Management Plan and the Skagit Wild and Scenic River Management Plan will be incorporated unchanged in the Forest Plan.

The Lower Pratt River Trail is an existing but inadequate trail. Since the Lower Pratt River Trail exists, it is possible to maintain whether it remains in the existing land allocations or the drainage is included into the wilderness.

Lastly, the Mountains to Sound Greenway published “Middle Fork of the Snoqualmie River Valley River Corridor Public Use Concept, Phase II” (1997). The executive summary for this document states: *“The River Corridor Public Use Concept, Phase II of the Middle Fork of the Snoqualmie River Study, develops the use and management framework established in Phase I. It recommends the location, scale, and level of facility development for day and overnight recreation use within one mile of the river corridor, from the Mouth of the Valley to Dingford Creek”* (Concept Plan page 1). Further, this Concept Plan acknowledges that the Lower Pratt River Trail does or would exist (Refer to the Concept Plan pages 14, 90, and 97).

Proposed Action

The Forest Service proposes to reconstruct and/or relocate approximately 3.25 miles of the Lower Pratt River Trail (designated Trail #1035) beginning at the Middle Fork Trailhead and continuing south, paralleling the Middle Fork Snoqualmie River and then turning at the Pratt and tying in with the Pratt Trail that follows the Pratt River.

Though maintenance on this trail has not occurred since the 1960s, field observations in calendar year 2006 indicate that the majority of this 3.25-mile segment of trail still exists and is adjacent to the Middle Fork Snoqualmie River and follows the curves of the river. However, approximately 0.75 miles of the trail located in Section 29 is not discernible and has been obliterated by vegetation or the lack of use or eroded by floodwaters of the Middle Fork Snoqualmie. To alleviate maintenance issues and to have the least affect on the various Riparian Reserves, the following would occur:

The original trail paralleled the Middle Fork Snoqualmie River along its entire length. With this proposal, beginning at the Middle Fork Trailhead, the first 0.40 miles of the trail would follow the original trail-tread. At this point, the original trail turned northwest and located immediately adjacent to the Middle Fork, crossed Rainy Creek, and then continues parallel to the Middle Fork Snoqualmie River. However, with this proposal, the trail would deviate from the original tread, turn southeast, construct new trail for approximately 0.10 miles and cross Rainy Creek above the original crossing, and then run southwest for approximately another 0.20 miles until the new trail again rejoins the original tread. Once rejoining the original tread, the trail would continue for approximately 0.55 miles until the trail reaches an unnamed, intermittent stream that runs from south to north and eventually flows into the Middle Fork Snoqualmie River. Once the trail crosses an intermittent stream, the trail moves away from the original route and would then be new construction. This segment of new construction would travel approximately 0.65 miles across the hillside until it reaches an existing logging road. Once joining the logging road/trail, it would follow this road(s) for an additional 1.00 miles until it again ties in with the original tread and the Lower Pratt River Trail (near the confluence of the Pratt and Middle Fork). The remaining 0.35 mile of reconstruction would be part of the original Pratt Trail.

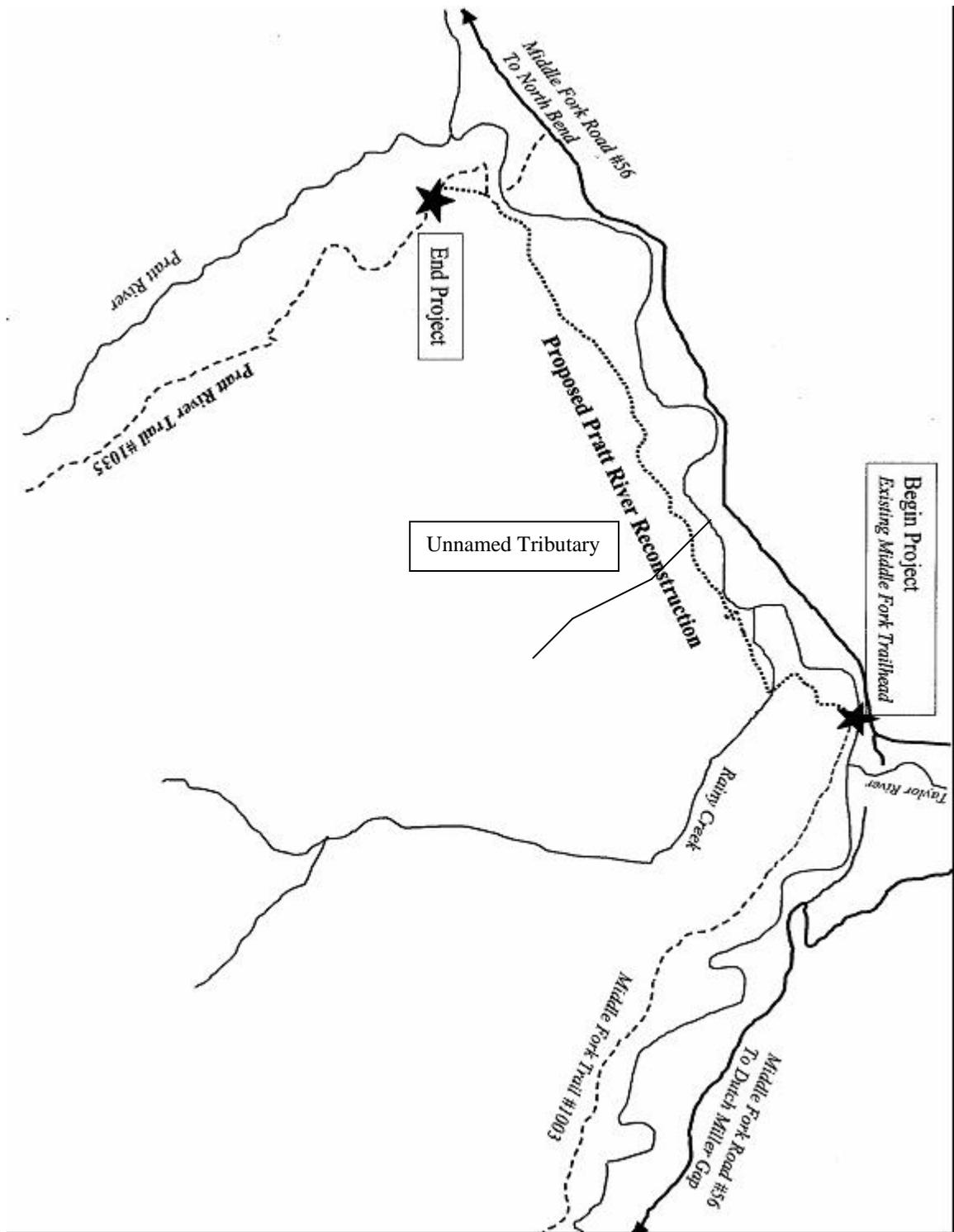
In summary, approximately 1.30 miles of the original Pratt Trail would be located along the original trail tread. Approximately 0.95 miles of trail would be new construction across the hillsides, and the remaining 1.00 mile of trail would be located on a series of logging roads and/or logging trails.

Of the 1.40 miles of trail, 0.80 miles would be in riparian zone(s) of the Middle Fork, Rainy Creek, and/or the unnamed intermittent tributary. The next 1.55 miles of trail would not be in riparian with the remaining 0.30 miles would be with the riparian zone(s) of either the Middle Fork and/or the Pratt River.

Though the Pratt Trail has not been maintained in several years, consistent use of the first 1 – 1 ½ miles of the trail by the public have kept the tread open and fairly clear of brush. Additionally, at approximately the 1-mile mark, many user built trails access the shores of the Middle Fork Snoqualmie River. These trails can have an impact on riparian resources through vegetation removal and soil erosion of trails. Further, there is no design for the user built trails thus, aside from the construction of the main trail; this proposal would build a side trail that would provide access to a gravel-bar along the Middle Fork Snoqualmie River. This access trail would be perpendicular to the main trail, would be approximately 300 to 400 feet in length, and would provide a way to access points of interest along the Middle Fork Snoqualmie River. All of the user built trails would be rehabilitated and “storm-proofed”⁴ so that the potential for erosion would be lessened, the user built trails could be restored to natural riparian conditions, and create a condition where native vegetation can once again grow in these areas.

⁴ *Storm Proof – This is a process that is implemented to prepare a road or trail so that it can be abandoned and would not be susceptible to erosion thus allowing vegetation to re-grow. This is usually accomplished by removing culverts, installing cross drains, cleaning ditches, ripping soils if appropriate and feasible and seeding the area with appropriate seed mixes until native vegetation can grow again.*

Figure 2: Proposed Action Map



The Lower Pratt River Trail has a designation of hiker and stock⁵ and this designation would remain the same after implementation. Thus, the 3.25 miles of trail would be constructed / reconstructed to a standard that would accept the wear and tear that animals can have on such trails. Typically, the tread would be approximately 18” to 24” in width with brush clearing extending approximately 4 feet on either side of the trail and trees limbed approximately 10 feet high as measured from the height of the tread. To prevent soil displacement and creating mud and the potential for soil erosion, puncheon⁶ is acceptable. Further, a bridge approximately 65 feet in length may be required for crossing Rainy Creek as well as a bridge being built over an unnamed intermittent stream.

Project Scope

This EA analyzes the environmental effects of reconstructing segments of the original Pratt Trail, constructing segments of new trail, and converting existing logging roads and logging trails to hiking trails along the Middle Fork Snoqualmie River and the lower part of the Pratt River for approximately 3.25 miles. Further, this project analyzes the effects of providing access to the Middle Fork Snoqualmie River by constructing an access trail from the main Pratt Trail down to a gravel bar along the river. Within the Snoqualmie Ranger District, District specialists are concurrently analyzing reconstruction and repair of the Snoqualmie Lake Trail. The Forest Service has determined that this other reconstruction project does constitute a similar but not a connected action, as defined by the Council of Environmental Quality (CEQ) (also refer to Chapter 2, *Alternative Development Process*). Therefore, for the purposes of site-specific analysis required by NEPA, The effects disclosed in this document is only for the proposed reconstruction, construction, and trail conversion of the Pratt Trail.

The Decision Framework

The Responsible Official for this proposal is the District Ranger for the Snoqualmie Ranger District, Mt. Baker-Snoqualmie National Forest. Based on the analysis in this document, and considering the public comments received during scoping and the 30-day comment period, the Responsible Official will decide:

- Whether to reconstruct, portions of the original Pratt Trail, construct new segments of trail, and convert existing roads and skid roads to trail, including all associated mitigation measures and to construct an access trail to the Middle Fork Snoqualmie River,
- Whether to modify the identified alternative, or
- To take no action at this time.

⁵ Stock includes any animal that is typically used as a pack animal (e.g. horse, goat, mule, and llama).

⁶ In this case, puncheon is defined as a series of heavy, rough-cut boards with one flat side, laid perpendicular to the trail tread for the purposes of crossing wet areas or areas susceptible to soil displacement. Puncheon resembles a boardwalk.

Relationship to the Forest Plan

This environmental assessment is tiered to the Final Environmental Impact Statement (FEIS) for the Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan, as amended. Major Plan amendments include:

- FEIS on Management of Habitat for Late Successional and Old Growth Forest Related Species Within the Range of the Northern Spotted Owl, as adopted and modified by the April 1994 Record of Decision, which provides additional standards and guidelines (USDA, USDI 1994, and commonly known as the Northwest Forest Plan).
- On July 24, 2007, the Under Secretary of the Department of Agriculture signed a new Record of Decision that removed certain requirements from all of the National Forest's land and resource management plans (LRMP's) within the range of the northern spotted owl. However, since the court in Northwest Ecosystem Alliance et al v. Mark Rey et al, Civ. No. 04-844, Western District of Washington has not yet granted the government's motion to lift the modified October 11, 2006, injunction. This project has been designed to be consistent with the 2001 ROD as modified by subsequent annual species reviews as allowed by the modified October 11, 2006 injunction. Implementation of this project will have no impact on any of the rare and uncommon species addressed in the ROD.
- The Alpine Lakes Area Land Management Plan (Selected Alternative from the FEIS) is a compilation of management direction for the selected alternative (Alternative E) found in the Alpine Lakes Area Land Management Plan FEIS. This is a working plan, which responds to the need of managers to have all management direction pertaining to the same subject appear in one location of the book. This plan contains direction in Alternative E and the direction common to all alternatives found in Appendix A of the FEIS (USDA FS, 1981).

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 (as noted earlier, the Alpine Lakes Area Management Plan and the Skagit Wild and Scenic River Management Plan will be incorporated unchanged in the 1990 Forest Plan).

The 1994-ROD and the 2001 amendments include additional forest-wide standards and guidelines. All of these guide management of this National Forest.

This entire trail project is within a Tier 2 watershed; refer to *Relationship to Other Documents*, below.

The first 0.10 miles of this trail is within "Late Successional Old-Growth" (LSOG). The remaining 3.15 miles of this trail is within "Late Successional Reserve" (LSR). Underlying these allocations is 5A-"Recommended Recreation Rivers" and 27-"Alpine Lakes Management Area" (Management Intensity – Scenic Forest).

The first 1.2 miles of the proposed trail project as well as the last 0.35 miles of the trail are in Riparian Reserve.

Riparian Reserve

Includes areas along rivers, streams, wetlands, ponds, lakes, and unstable or potentially unstable areas where the conservation of aquatic and riparian-dependent terrestrial resources receives primary emphasis. Riparian Reserve standards and guidelines apply and are added to the standards and guidelines of other designations (USDA, USDI 1994, page 7 and C-1).

Late Successional Reserve (LSR)

These Reserves are designed to maintain a functional, interactive, and late-successional and old-growth forest eco-system, in combination with the other land allocations and standards and guidelines of the 1994 amendment with the different LSR's serving as habitat for late-successional and old-growth related species, which includes the northern spotted owl. A Forest-wide Late Successional Reserve Assessment (USDA FS 2001) has been prepared.

Also shown on the Alternative 9 map, all LS/OG1s and LS/OG2s within Marbled Murrelet Zone 1, except in the Quinault Special Management Area, are Late Successional Reserve, ... Where LS/OG status is used to define the boundaries of a LSR, the boundaries are fixed regardless of the future condition of those (or other) stands (USDA, USDI 1994, page C-10).

Management Area 5A, Recommended Recreation Rivers

Underlying the LSR, in the project area is "Recommended Recreation Rivers" (both the Middle Fork Snoqualmie and Pratt Rivers are included) to be listed under the Wild and Scenic Rivers Act (Forest Plan, page 4-33). With this allocation: Evidence of a full range of management activities may exist, including existence of low dams, diversions, residential development, and forestry uses (past and present timber harvest). The rivers are readily accessible by railroad and bridge crossing. Streamside bank is generally natural condition. Water quality is such that waters are fishable and people can swim, or a water improvement plan exists or is under development in compliance with Federal and State laws (Forest Plan, page 4-189).

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

Underlying the LSR, in the project area is "Alpine Lakes Management Area – Scenic Forest": The goal of this allocation is: *Manage Alpine Lakes Wilderness and management area in accordance with the Record of Decision, Selected Alternative, Alpine Lakes area Land management Plan Final Environmental Impact Statement, November 2, 1981*. Intensities in this management prescription are listed under "SF" (*Scenic Forest*) (USDA FS, 1990, page 4-277). The goal for the scenic forest areas is to retain or enhance viewing and recreation experiences. Developments and permitted uses in the seen area from recreation sites, roads, and trails within this allocation will meet adopted visual quality objective. These proposed uses within the

allocation will; be integrated with the natural landscape (USDA FS, Alpine Lakes Management Plan, Selected Alternative, pages 6 and 7).

Relevant Goals, Standards, and Guidelines

The following includes goals, and standards and guidelines from the Forest Plan as amended that are most applicable to this project. However, all applicable goals, and standards and guidelines apply; refer to the Forest Plan, as amended for the complete descriptions.

Riparian Reserve Standards and Guidelines

- RM-1: New recreational facilities within Riparian Reserves, including trails and dispersed sites, should be designed to not prevent meeting Aquatic Conservation Strategy objectives. Construction of these facilities should not prevent future attainment of these objectives. 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 (USDA, USDI 1994, page C-34).
- RM-2: 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 (USDA, USDI 1994, page C-34).

Late Successional Reserve Standards and Guidelines for Multiple Use Activities

- While most existing uses and developments are envisioned to remain, it may be necessary to modify or eliminate some current activities in Late-Successional Reserves that pose adverse impacts (USDA, USDI 1994, page C-16).
- For recreational uses: Dispersed recreational sites, including hunting and fishing, generally are consistent with the objectives of Late-Successional Reserves. 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 Late-Successional Reserve objectives (USDA, USDI 1994, page C-18).

Wild and Scenic Rivers (USDA FS ROD, 1990)

- Goals: Provide opportunities for public access and use of the rivers while providing for rights of adjoining private landowners (1990, page 4-7).
- Maintain a leadership role in protecting designated Wild and Scenic River values (1990, page 4-7).
- Maintain or enhance the recreation, visual, wildlife, fisheries, and water quality values of the existing and recommended wild, scenic, and recreation rivers (1990, page 4-95).
- (Recreation Planning part “a”): Proposed recreational activities shall be compatible with river values (1990, page 4-190).

- (Recreation Planning part “c”): Trails may be constructed (1990, page 4-190).

Key Watershed Standards and Guidelines (USDA, USDI 1994)

- Key Watersheds are highest priority for watershed restoration (1990, page C-7).
- Watershed analysis is required prior to management activities, except minor activities such as those Categorically Excluded under NEPA (and not including timber harvest) (1990, page C-7).

Aquatic Conservation Strategy (USDA, USDI 1994)

- Contained within the Forest Plan is the Aquatic Conservation Strategy (ACS). This strategy was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems contained within them on public lands (1994, page B-9). The important phrases within these standards and guidelines are “meet Aquatic Conservation Strategy Objectives,” does not retard or prevent attainment of Aquatic Conservation Strategy objectives,” and “attain Aquatic Conservation Strategy objectives ” (1994 page B-10). There are 9 ACS objectives that apply to lands administered by the Forest Service and Bureau of Land Management (BLM) and are listed within the Forest Plan (1994 page B-11). Refer to Appendix B of this document for an analysis to determine consistency with these 9 ACS objectives.

Relationship to Other Documents

Watershed Analysis

As has been mentioned, this trail project is located within a Tier 2 Watershed – a component of the Aquatic Conservation Strategy (USDA, USDI 1994). Tier 2 watersheds may not contain at-risk fish stocks but they are important sources of high water quality (USDA, USDI 1994, page B-18). Key watersheds are highest priority for watershed restoration. The proposed project is located within the Middle Fork Snoqualmie River and Pratt River watersheds (both are 5th field watersheds). Watershed Analysis is complete: *Middle Fork Snoqualmie River Watershed Analysis (1998)*. However, The Middle Fork of the Snoqualmie Watershed analysis area contains four “fifth field” watersheds. Although the Forest Plan recommends that watershed analysis be conducted at the fifth field level, the Forest Supervisor determined that analyzing the entire Middle Fork at one time would produce a better understanding of the conditions and trends within the watershed (WA, page 1-1). No new roads are proposed with this document, road mileages would not increase, or decrease and some watershed restoration would occur by rehabilitating user built hiking trails.

The Watershed Analysis summary of key findings table lists a recommendation for recreation use as: *Consider the construction of new trails and the reconstruction of old trails and road-to-trail opportunities to meet wilderness standards and to provide non-wilderness opportunities (WA, page 5-16)*.

Late Successional Reserve Assessment

A Late Successional Reserve Assessment for the entire Forest is complete (USDA FS 2001). This proposed project runs through LSR 122, a large 16,734 acre reserve that falls within four watersheds. Vegetation that would be removed along the length of the trail may include shrubs, some small pole size hardwoods (e.g. alder), and small coniferous saplings, and the limbs of trees where the trees are adjacent to the trail and the limbs overhang that tread.

Roads Analysis

Forest-wide roads analysis, a process used to make informed decisions related to road management, is complete: *Mt. Baker-Snoqualmie National Forest Roads Analysis, July 2003*. Roads analysis is not a decision-making process, but it assesses Forest transportation management needs, long-term funding, and expected ecosystem, social, and economic effects. Each road segment on the Forest was assessed for both access needs (e.g. needed for recreation, vegetation management, etc.) and by concern for resource impacts. This information can be used to provide the responsible official with critical information needed to identify and manage the Forest road system.

The Middle Fork, Taylor River, and Pratt valleys were railroad logged beginning approximately 80 to 90 years ago. By 1935, a railroad trestle spanned the Middle Fork Snoqualmie River and provided access to the Pratt drainage with logging beginning in 1936 (PRLCE, 1990, page 199)⁷. Aside from railroad logging, loggers experimented with “Cat” logging on the south side of the Pratt River in 1936 with logs being transported by rail. Logging ended in approximately 1941 or 1942 (PRLCE, 1990, page 87 and 200). After the railroad logging was complete, the railroad bridge “washed-out” isolating the Pratt Valley from any vehicular access however, the valley limiting access to travel via foot or horse along the Middle Fork Trail. In the mid 1970s, the Weyerhaeuser Company built a truck bridge across the Middle Fork for the purposes of logging and commodity extraction⁸. The logging that took place at this time was in the lower northern end of the drainage. At this point in time, loggers constructed new skid roads and utilized segments of the old railroad grades however, not long after the truck bridge had been built, it too wash-out during winter flooding.

In approximately 1985, the Forest Service contemplated again constructing a bridge across the Middle Fork River but decided to abandon the effort. The Forest Service now owns the lands in the Pratt drainage however; all of the roads in the drainage were pre-existing and built by private companies. None of the existing roads are identified by the agency and are considered abandoned. There are no plans now or in the future to access the Pratt Valley other than by foot or pack animal.

⁷ PRLCE = Pratt River Logging Camp Evaluation, 1990

⁸ Information from personal conversation with long-time FS employees

Alpine Lakes Area Land Management Plan, Final Environmental Impact Statement (FEIS)

The management plan that resulted from this FEIS is incorporated entirely into the 1990 Forest Plan.

Alpine Lakes Wilderness Recreation Use, Environmental Assessment (EA)

The purpose for this environmental assessment is to bring the Alpine Lakes Wilderness into compliance with Alpine Lakes Plan management standards for 1) protection of the physical environment, and 2) for providing a sense of solitude. The need derives from concern over damage to vegetation and soils in popular camping and day-use zones in the Wilderness. Solitude is also no longer a part of the wilderness experience at many popular destinations. Increasing recreational use and deteriorating resource conditions necessitate action (USDA FS, 1993).

Other Relevant Laws and Direction

National Environmental Policy Act

This environmental assessment has been prepared in accordance with regulations established under the National Environmental Policy Act of 1969 (NEPA).

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act of 1973 as amended, requires federal agencies to review actions authorized, funded, or carried out by them, to ensure such actions do not jeopardize the continued existence of federally listed species, or result in the destruction or adverse modification of listed critical habitat. The Forest Service consults with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS – also known as NOAA fisheries) if projects potentially could affect listed species. The MBS currently has three programmatic consultation documents with these regulatory agencies that cover much of the Forest's program of activities for several years.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires Federal agencies to consult with the Secretary of Commerce (NMFS) regarding certain actions. Consultation is required for any action or proposed action authorized, funded, or undertaken by the agency that *may adversely affect* essential fish habitat (EFH) for species identified by the Federal Fishery management Plans. For this project, the Pacific Coastal Salmon Plan manages for Chinook, Coho, and pink salmon. According to EFH regulations, 50 CFR section 600.920(a)(1), EFH consultations are not required for completed actions or project specific actions with a signed decision under NEPA, and these regulations enable Federal agencies to use existing consultation and environmental review procedures to satisfy EFH consultation requirements.

National Historic Preservation Act of 1966, Executive Order 11593, 36CFR800.9 (Protection of Historic Properties)

Section 106 requires documentation of a determination of whether each undertaking would affect historic properties. The Mt. Baker-Snoqualmie National Forest (MBS) operates under a programmatic agreement between Washington State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation for consultation on project determination.

Wild and Scenic Rivers Act

Public Law 90-542 of 1968, known as the Wild and Scenic Rivers Act, established a National Wild and Scenic Rivers System. The Act named eight rivers as “instant” components of the National System and named “study-rivers” for potential additions to the National System (USDA FS, Appendix E page E-1). The Middle Fork Snoqualmie River is a recommended river for inclusion into the system with segments that would be designated wild, scenic, and recreation with the designation of Recreation River in the location of this proposed project (USDA FS 1990, page 4-189 and Appendix E page E-227). For the Middle Fork, the outstandingly Remarkable Values of this river are recreation, fish, and wildlife (USDA FS, Appendix E page E-5). The Pratt River is a recommended river for inclusion into the system with segments that would be designated wild or recreation with the designation of Recreation River in the location of this proposed project (USDA FS 1990, page 4-189 and Appendix E page E-244). For the Pratt, the outstandingly Remarkable Values of this river are recreation, geologic, fish, wildlife, and ecological (USDA FS, Appendix E page E-5). Currently the Pratt River is a “wild” and “recreation” river and if bill HR 4113 (or a variant) is passed and becomes law, then the entire designation for the Pratt River would change to a “wild” river over its entire length.

Evaluation of *water resources projects* within the National Forest System is addressed in the Wild and Scenic Rivers Act (82 Stat. 906, as amended; 16 U.S.C. 1271 (Note), 1271-1287). With this project, reconstruction, relocation, and converting roads to trail do not meet the definition of a *water resources project*. Though federally assisted, the proposed activities are not within the bed and bank of the Middle Fork Snoqualmie or Pratt Rivers thus, they and would not have a direct and adverse effect on the values for which such a river has been recommended.

Clean Water Act

The Clean Water Act of 1977 (CWA) and subsequent amendments established the basic structure of regulating discharges of pollutants into waters of the United States. The Environmental Protection Agency (EPA) has the authority to implement pollution control programs and to set water quality standards for all contaminants in surface waters. The EPA delegated implementation of the CWA to the States; the State of Washington recognizes the Forest Service as the Designated Management Agency for meeting CWA requirements on National Forest System lands. Executive order 12088 also requires the Forest Service to meet the requirements of the Clean Water Act. All federal and state laws and regulations applicable to water quality will apply in any implementation of the trail improvements.

Section 303(d) of the federal Clean Water Act requires Washington State (Department of Ecology) to periodically prepare a list of all surface waters where pollutants have impaired the beneficial uses of water (for drinking, recreation, aquatic habitat, etc.). Types of pollutants include high temperatures, fecal coliform, excess nutrients, low levels of dissolved oxygen, and toxic substances. A map of 303 (d) Category 5 Assessed Waters can be found at:

<http://www.ecy.wa.gov/services/gis/maps/wria/wria.htm>. There are no sections of the Middle Fork Snoqualmie River or its tributaries listed on this website. The closest listed site is on the Snoqualmie River and due to temperature.

Clean Air Act

The Clean Air Act Amendments of 1977 give federal land managers an affirmative responsibility to protect the air quality-related values (including visibility) within Class I areas. Wilderness is designated as Class I areas for air quality protection. Visibility is a value that is protected primarily within the boundaries of a Class I area, although the Clean Air Act includes provision for definitions of vistas integral to a visitor's experience, even if these vistas extend beyond the boundaries of the Class I area.

Executive Orders 11988 (Floodplains) and 11990 (Wetlands)

Executive Orders 11988 and 11990 (1977) address floodplains and wetlands with the purpose of these orders being to: *"...avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development..."* and *"...avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands..."*

Invasive Species Management

The 1999 Executive Order on invasive species, (direction found in Forest Service Manual 2080) the National and Regional strategies for noxious weed management, and the Mediated Agreement of May 24, 1989, identify prevention as the preferred strategy for managing competing and unwanted vegetation. In addition, all work on the MBS is guided by the Forest Plan, Forest-wide Standards and Guidelines, Prevention Strategies, and Best Management Practices for noxious weeds, including cleaning of construction equipment, prompt revegetation of disturbed sites, and use of weed-free mulch (USDA FS, 1990, as amended 1999, Amendment #14).

A Record of Decision (ROD) for the Pacific Northwest Region Invasive Plant Program: Preventing and Managing Invasive Plants, Final Environmental Impact Statement (USDA October 2005). This document amends all Forest Plans in Washington and Oregon with goals, objectives, and standards related to invasive plants that complement the Best Management Practices already in effect on the MBS. The 2005-ROD standards also prescribe prevention, cleaning equipment, use of weed-free straw and mulch, use of weed-free rock and gravel sources, and prompt revegetation with native species or non-invasive non-natives. This EA is tiered to this broader-scale analysis (the FEIS) and all activities proposed comply with the new management direction.

Public Involvement

In May of 2002, following the development of the proposed action, “scoping” letters were mailed to a large number of individuals and organizations. In addition, the Responsible Official contacted the following Tribal chairs, asking for comments or any input: Colville Business Council, Yakima Tribal Council, Snoqualmie Tribe, and Tulalip Board of Directors. Information about the proposed Lower Pratt River Trail was included in these notices, along with information concerning a public meeting held on May 23 at the Snoqualmie Ranger District Conference Room. Thirty-four respondents commented on the proposal: The US Fish and Wildlife Service and a number of groups, organizations, and individuals. The Lower Pratt River Trail reconstruction/relocation project appeared in the Planning, Appeals, and Litigations (PALS) database starting in 2002 (which is the electronic form of the Proposed Actions and posted quarterly on the MBS website). All comments received were used to aid in developing issues and alternatives. See *Appendix A* for a complete list of comments received and how they have been used in the analysis.

Four Tribal Chairs were contacted in 2002 about this project. There is no record in the file indicating if any Tribal member commented on the proposed project when planning initially began. Thus, a second letter requesting comments went to the same four Tribal Chairs in August 14, 2006. Due to this second contact letter, the *Environmental and Natural Resources Department Director* of the Snoqualmie Tribe has shown interest in this project. Refer to *Appendix A* for a discussion on comments from this Tribal Representative.

Copies of the pre-decisional EA were mailed to those who participated in the public and government-to-government scoping process or who had requested a copy of the EA, including individuals, groups, and Tribal councils. On July 2, 2008, a legal notice of the availability of the EA was published in the Snoqualmie Valley Record, initiating the 30-day pre-decisional comment period. Twelve emails and letters were received within the established comment period. One letter was received outside of the established comment period. Substantive comments received and where and how they are addressed in the EA are available in Appendix B of the Decision Notice.

Significant Issues

Identifying the significant (or key) issues provides for the analysis in this document. Significant issues help in developing alternatives to the proposed action, prescribe management requirements and constraints, and develop mitigation measures; they too aid in analyzing environmental effects. The Responsible Official for the proposed project, District Ranger, reviewed the public comments received during scoping and the preliminary issues to determine the significant issues that are included in this analysis. The indicators or measures included for each issue compare alternatives and can be traced through the analysis.

Significant or Key Issues

Potential Conflicts between User Groups

Including mixed use (stock, mountain bikes, and hikers) on this segment of trail could have impacts on riparian resources and create conflicts between different user groups. Trails that are designed for stock are required to be upgraded to a higher standard than a hiker only trail however if use is heavy, riparian resources could be affected by the increased potential for the creation of mud that could run-off and enter either the Middle Fork Snoqualmie River or its tributaries.

Measures or Indicators:

- 1). Length of trail in Riparian Reserves and the number of stream crossings.
- 2). Projected number of users of various types.
- 3). Results of a study on the Middle Fork Trail where mountain bikes are allowed on the trail on odd numbered weekdays.

Potential Effects to Wildlife and Their Habitats

The proposed reconstruction, relocation, and the conversion of old abandoned logging roads to trails would take place within an LSR and within Grizzly bear recovery area.

Reconstruction/relocation of this trail has the potential of removing vegetation that could affect habitat for the spotted owl and/or marbled murrelet. Further, reopening this trail has the potential to affect grizzly bear core habitat as well as affecting low elevation, early season habitat if the trail use were to exceed 15 parties per week or more.

Measures or Indicators:

- 1). Estimate of the amount of Grizzly bear habitat that could be affected.
- 2). Total amount of spotted owl/murrelet habitat and LSR that would be affected.

Potential Effects to Riparian Reserves

Portions of the proposed reconstruction, relocation, and the conversion of old abandoned logging roads to trails would take place within Riparian Reserves. Reconstruction/relocation of this trail and opening existing trail has the potential of removing vegetation that could affect the habitat of riparian dependent wildlife species as well as increasing the potential for eroded soils to reach the Middle Fork Snoqualmie River.

Measures or Indicators:

- 1). Estimate of the length of trail in Riparian Reserves.
- 2). The total amount of affected acres through soil disturbance or vegetation removal.

Other Issues

Potential Effects to the Alpine Lakes Wilderness

The proposed reconstruction, relocation, and the conversion of old abandoned logging roads to trails would reconnect the Middle Fork trail bridge to the existing segment of the Lower Pratt River Trail that currently parallels the Pratt River from Pratt Lake down to the confluence of the

Pratt with the Middle Fork Snoqualmie River. Reopening this existing trail has the potential of increasing the numbers of users (hikers) that access that portion of the Alpine Lakes Wilderness especially around Pratt Lake. Further, mountain bikes could access this trail system allowing easy access to the Alpine Lakes Wilderness (especially if the wilderness boundary incorporates the Pratt drainage. Lastly, allowing mountain bikes on the reconstructed trail could affect the status of this drainage for inclusion into the Alpine Lakes Wilderness.

Measures or Indicators:

- 1). Estimated number of users that would enter the wilderness both from the Pratt Lake area and from the Middle Fork area. 2). The potential for Mt. Bikes entering the Pratt area via the newly reconstructed trail.

Potential Effects to Soils

Portions of the proposed trail that would be reconstructed or relocated or where old abandoned logging roads are converted to trail may be within clay soils that are prevalent in the lower valley areas. These clay soils are prone to erosion when wet, especially when heavy traffic is introduced whether by boots, wheels, or hooves.

Measures or Indicators:

1. The amount of trail that would be built in or around this soil type and the use of proven mitigation measures that minimize erosion potential.

Law Enforcement

In the past, law enforcement was lacking as well as too little Forest Service presence in the Middle Fork drainage. Thus, reopening this segment of the Lower Pratt River Trail may entice users of all types to use the trail even though it may be closed to such uses as bikes and stock.

Measures or Indicators:

1. The types of measures used to deter unauthorized use such as bikes and stock on closed trails.

Economics

There is a concern that there are limited funds available for improvement of an inadequate trail and maintenance of existing trails and that the Forest Service may not have adequate monies to maintain this trail to appropriate standards for the designated use.

Measures or Indicators:

1. Costs of maintaining trails with different users groups.

Chapter 2 - Alternative Descriptions Including the Proposed Action

Introduction

It is not known when the Middle Fork Trail and Pratt Trails⁹ were constructed however historic mapping indicates that it existed in one form or another in at least 1905 (*Refer to “History” in Chapter 1 of this document*) (the same year the Forest Service was established). Maintenance of the Pratt Trail continued until the 1960s however, for various reasons, maintenance dollars were diverted to other trail projects on the district and consequently, the Lower Pratt River Trail began to fall into disrepair. In the early 1990s, an environmental assessment (EA) to reconstruct this same segment of trail however; the money that was to be used for reconstruction was diverted to other higher priority trail projects. Once this diversion of funding occurred, the trail fell further into disrepair. Though the trail is not adequate for general use, it is listed as a desired trail in Table E-1 of the Land and Resource Management Plan (LMRP) (*Refer to “Desired Conditions” on page 3 of this document*).

In this chapter, two alternatives are described in detail for the reconstruction, relocation, and converting abandoned logging roads to trail are described. The alternatives are presented in comparative form, so that the differences among them are clear to both the decision-maker and the public.

Alternative Development Process

The ID Team for this project assessed the existing condition(s) of the recreation opportunities in the Middle Fork, Taylor, and Pratt River drainages as well as the existing condition(s) within the Alpine Lakes Wilderness. The existing conditions were then compared to the desired future conditions as described in the Mt. Baker-Snoqualmie National Forest, Forest Plan, the Middle Fork Snoqualmie River Watershed Analysis, the Alpine Lakes Area Land Management Plan FEIS, and the Alpine Lakes Wilderness Recreation Use Environmental Assessment. Also considered is the proposal by the Honorable Dave Reichert to expand the Alpine Lakes Wilderness (November 2007) to include those lands within the Pratt River drainage.

Once a proposed action had been determined, the scoping process began, including considerable public involvement (*See Appendix A*). Early public participation produced input from 34 groups and individuals. The ID Team reviewed each comment and used this input, as well as issues from

⁹ When initially constructed there were two separate trails, the Middle Fork Trail paralleled the Middle Fork Snoqualmie River while the Lower Pratt River Trail paralleled the Pratt River joining near the confluence of the two rivers. In the late 1990s the segment of trail paralleling the Middle Fork Snoqualmie River from the Middle Fork Trail Bridge down to the confluence with the Pratt River and the Lower Pratt River Trail were considered one trail system thus, these two trails became the Lower Pratt River Trail,

a public meeting, and internal (agency) scoping, to identify significant issues. These comments were used, in combination with the stated purpose and need for action, to formulate alternatives, design criteria, and mitigation.

The No Action alternative is required (40 CFR 1502.14d). The no action alternative is typically a baseline for comparison to the action alternatives, although it does not meet the stated need for action. For the Lower Pratt River Trail, No Action is defined as no change from current conditions (i.e. the trail is currently inadequate and would remain inadequate thus not addressing the need to address public safety). Further, the Lower Pratt River Trail segments of existing trail that are currently being used would continue to be used without maintenance. Access to the Pratt drainage would be limited by vegetation growth, blowdown, and possibly wading the Middle Fork, or accessing the Pratt drainage by following the existing trail (beginning at I-90 trailheads) that parallels the Pratt River down to the Middle Fork Snoqualmie River.

All proposed actions would meet existing laws, regulations, and policies. All known threatened, endangered, or sensitive plant or animal species are protected from adverse impacts. Wetlands would not be adversely affected. Cultural Resources would be protected in accordance with the National Historic Preservation Act, Executive Order 11593, and other legislation and policy.

Alternatives Considered but Eliminated from Detailed Study

When the scoping process started for the reconstruction, relocation, and conversion of the Lower Pratt River Trail, several alternative proposals surfaced. A brief description of each is disclosed below, along with the reasons for eliminating these alternatives from detailed study.

Rebuild the Trail all in the Original Location

This alternative would rebuild and reopen this section of the Lower Pratt River Trail in its original location and to a level that would mimic original objectives by accommodating both hikers and pack animals. The original location was determined through reviewing several maps dating from the 1920s and later. By these reviews, the maps indicate the Pratt and Middle Fork trails were located adjacent to these rivers and when built, paralleled the channels following all of the curves of the river. On the ground, field investigations indicate that approximately three-quarters of a mile of the original trail no longer exist due to repeated flooding of the Middle Fork Snoqualmie River or by the tread becoming indiscernible due to heavy vegetation growth. Where the tread no longer exists, the trail ran parallel to the Middle Fork. This alternative is eliminated from detailed study for the following reasons:

Flooding is common along all of the rivers within the watersheds in and around the Middle Fork valley (e.g. Taylor, Pratt, Middle Fork etc.). Over time, several improvements along these channels have been damaged or obliterated due to these various floods including: several railroad, truck, and trail bridges, trails, campgrounds, roads, and others especially if these features are within a floodplain; eventually, the stream/river would reoccupy the site. Thus, relocating and rebuilding the trail in or near the original location would place those segments of trail in danger

again of obliteration by future flooding. The risk of trail damage is too high and could be very costly over time due to repairs and/or replacement.

The entire original trail is located in Riparian Reserve and several parts along this route are in wet areas. Rebuilding/relocating a trail in wet areas creates several problems depending on the season including: water inundation from snow melt and rain run-off, soft soils that are unsuitable for tread location requiring elaborate structures to circumvent the problem areas (e.g. puncheon or bridges), constant maintenance due to the overgrowth of brush, and others. Further, the more elaborate trail structures are, the more costly they are to maintain over time.

In approximately the first 1 ½ miles of this trail as measured from the Middle Fork Trail Bridge, two hiker bridges or designed “fords” would have to be built across both Rainy Creek and an unnamed intermittent tributary. The Rainy Creek Bridge was originally located near the Middle Fork and located in a less than an ideal site due to the potential for flood damage and the location is poor for the trail and bridge approaches due to wet soils. If a bridge is reinstalled at this point, maintenance costs would be high and the potential for damage due to flooding would be high.

Build Trails in Other Locations

This option would build trails to other locations within the Taylor, Pratt, and Middle Fork drainages. The destinations for these trails could be: Rainy Lake, Garfield Ledge, Stegosaurus, and others. There are no trails to these suggested destinations unless trails are “*user-built*.”¹⁰ Further, none of these destinations are listed in the “system” trail inventory in the Forest Plan (Table E-1, LRMP, page E -20 and 21 lists all of the system trails on the Snoqualmie RD).

This alternative was eliminated from detailed study because: These alternate trails would not meet the purpose and need of providing for public safety and providing for enhanced recreation use by maintaining and improving an existing recreation opportunity as well as providing another viable opportunity for hiking within the proposed wilderness area that is currently not available to many Forest users. (Refer to pages 7-9 of this document).

Further, this alternative was eliminated from detailed study because: Constructing other trails would not be within the scope or decision space of this project. The scope of this project is to reconstruct, relocate, and complete road/trail conversions of abandoned railroad grades and logging roads and provide access to the Middle Fork Snoqualmie River.

Lastly, this alternative was eliminated from detailed study because it is not within the decision framework of this document. Within this framework, the deciding officer would decide whether to reconstruct the Pratt River Trail, whether to modify the alternatives or take no action at this time. (Refer to page 12 of this document).

¹⁰ *These are trails that have been developed over time by the public. These types of trails have never existed as a system trail, they have not been designed by engineers, they have not been developed with any environmental analysis or concerns, and they have never been maintained by the Forest Service.*

Access Pratt by Building a Bridge over the Middle Fork

Currently there is a trail that parallels the Pratt River (No. 1035) but is only accessible by hiking approximately 9 miles from trailhead(s) along I-90, and then down the trail to the Middle Fork. The other option would be to wade the Middle Fork River to access the trail at the confluence of the Pratt and the Middle Fork Rivers or to walk south on the un-maintained segment of the Lower Pratt River Trail from the Middle Fork Bridge.

This option would not reconstruct the Lower Pratt River Trail so that it becomes a trail adequate for use by hikers and pack animals. However, this option would provide access to the Pratt Trail via the construction of a footbridge across the Middle Fork Snoqualmie River. Once the bridge was in place, connector trails would connect the bridge approaches, both to the Pratt Trail and the Middle Fork Road (Forest Road 56). Lastly, a trailhead is required along Forest Road 56 to access this new bridge with a parking capacity of approximately 25–30 vehicles.

This alternative has been eliminated from detailed study because: A bridge at this location would not be financially prudent considering that there is an existing footbridge and trailhead available approximately 3.0 miles upstream from this location. Further, several bridges directly accessing the Pratt Valley have been constructed over the past several decades including two railroad bridges, at least one truck bridge, and at least one hiker bridge (Refer to the photo on the following page). In all cases, each of these bridges was “washed-out” during high water in flood events. This is because there are no locations where the stream channel stays static over time (e.g. locations where bedrock is present) resulting in a total loss of structures during flood events.

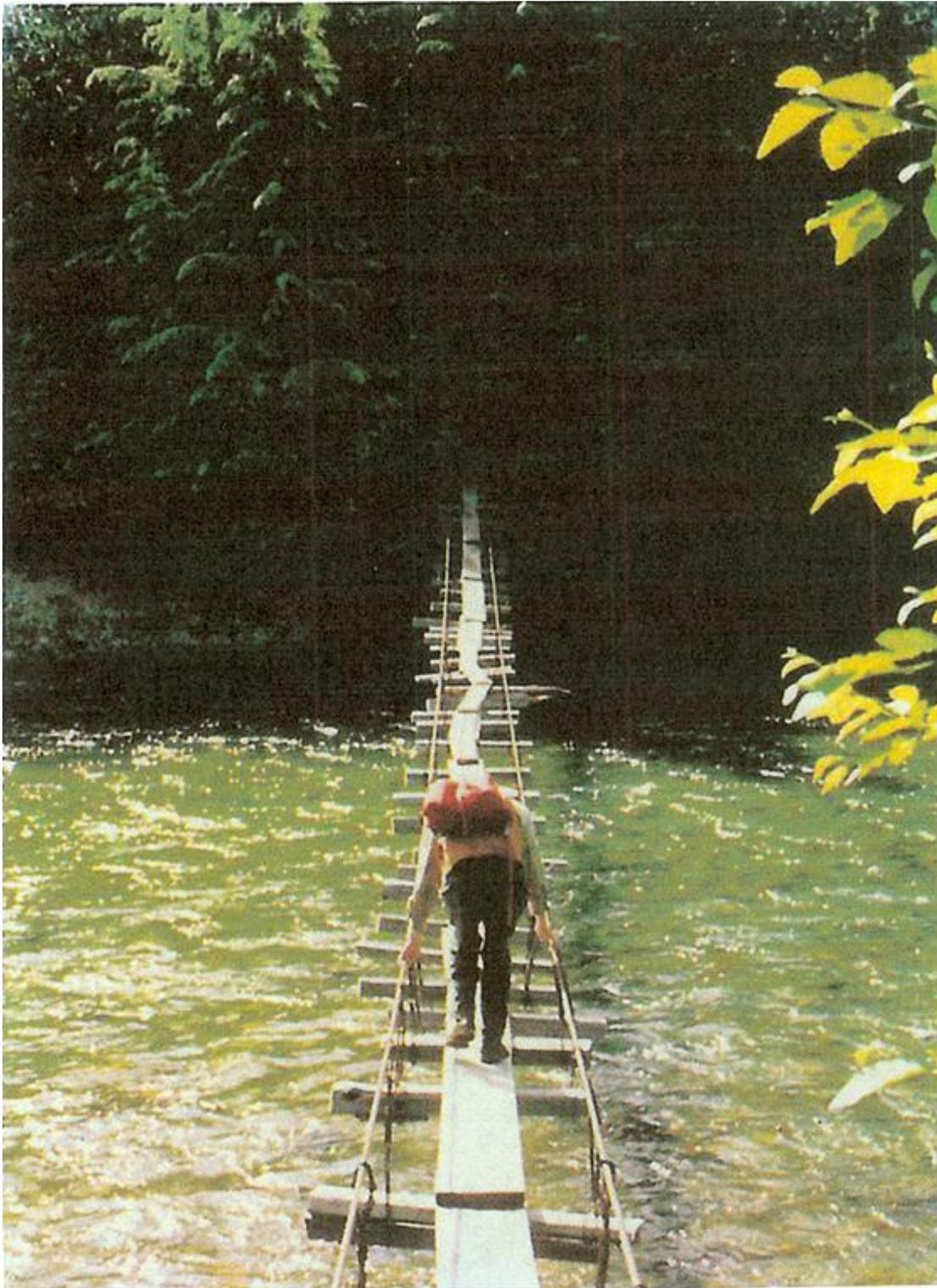
Allow Mountain Bike use on the Lower Pratt River Trail

Currently, there are four trails or segments of trails open to Mountain Bikes and they include the Snoqualmie Lake Trail (Trail 1002), the CCC Trail, the closed Middle Fork road from Dingford Creek to Hardscrabble, and a portion of the Middle Fork Trail.

The Middle Fork Trail, beginning at the Middle Fork Trailhead (heading east towards Goldmyer Hot Springs) is open to Mountain Bikes. Historically, the Middle Fork Trail was only open to hikers and pack animals but, the Middle Fork Access and Travel Management Plan (Middle Fork ATM) (January 2005) did experiment with allowing mountain bikes on the Middle Fork Trail. The main concerns with bike use during this experimental period were hiker/mountain bike encounters and damage to the trail. After a lengthy trial period that allowed mountain bike use on odd number days and during the dry times of the year, it was decided that use could continue on a permanent basis (continued use would be on odd numbered days and during the dry months of the year). Given this success, proponents of mountain bike use would like to see the Lower Pratt River Trail opened to mountain bikes under the same parameters as the Middle Fork Trail.

Following the 30-day comment period, the ID Team for this project did consider an alternative that would allow hikers, pack animals, and mountain bikes on the Lower Pratt River Trail. However, this alternative was eliminated from detailed study because: The Lower Pratt River Trail connects with the Pratt River Trail near the confluence of the Middle Fork Snoqualmie and

Figure 3: Foot Bridge across Middle Fork River (Approximately 1974)
(Photo Courtesy of Bill Davis)



Pratt Rivers. Once this trail system is improved and would become accessible to mountain bikes, the possibility exists that mountain bikes could access the Alpine Lakes Wilderness near Pratt Lake. With the formation of the wilderness system, regulations state that mechanical devices (such as mountain bikes) are prohibited from accessing the wilderness (36CFR 261.18(b)). At this time, the Forest Service could not guarantee compliance with this CFR because there is no adequate law enforcement system in place to deal with potential violations in this part of the wilderness. Further, designating the Lower Pratt River Trail for mountain bike use could affect the status of the Pratt drainage, thus jeopardizing the drainage for inclusion in the existing wilderness.

Alternatives Considered in Detail

Alternative 1—No Action

Selecting the No Action alternative would mean that the Lower Pratt River Trail from the Middle Fork Trail Bridge down to or near the confluence of the Pratt and Middle Fork Rivers would remain in its current condition and would continue to be inadequate for use by hikers, rescue personnel, and others. None of the objectives listed in the Mt. Baker-Snoqualmie National Forest Land Management Plan (LRMP), Alpine Lakes Area Management Plan EIS (ALMP), and the Alpine Lakes Wilderness Recreation Use EA (ALRU) would be addressed or accomplished at least in part. Specifically the following would not be addressed:

1. **Public Safety:** As described in the “Need” statement of this document, the only adequate trail that accesses the Pratt Valley is via a maintained trail that parallels the Pratt River from the Pratt Lake area. The majority of users that access this trail come from the trailheads along the I-90 corridor. Thus, there is no adequate, direct access to the lower Pratt drainage from the Middle Fork road, the Middle Fork Campground, or the Middle Fork Trail located on the south side of the Middle Fork Snoqualmie River. Due to the lack of access, the public safety issue is true regardless if the Pratt River drainage is incorporated into the Alpine Lakes Wilderness or not.
2. Currently, overuse is a problem in several areas in the Alpine Lakes Wilderness (Alpine Lakes Wilderness Recreation Use EA, 1993). This alternative would not provide for an adequate hiking opportunity within the proposed wilderness area that could take pressure off other areas in the wilderness that are overused.
3. “Special emphasis will be given to identification and planning for trails at elevations where the ground is usually snow free for at least half of the year” (LRMP).
4. Priority for use of trail funds will generally be as follows: b) “Reconstruction and relocation of existing trails to protect the resources” (LRMP).
5. “Hiker and interpretive trails should be provided near most large campgrounds to provide for visitor use and enjoyment. Some of these should be suitable for barrier free access” (LRMP).

Alternative 2—Proposed Action, Reconstruct or Relocate for use by Horses and Hikers

Alternative 2 is the proposed action, as described in Chapter 1. Implementing this alternative would make the Lower Pratt River Trail adequate for use by hikers, pack animals, and provide for public safety. Implementation would include reconstructing approximately 1.30 miles of the original Lower Pratt River Trail tread, Relocating approximately 0.95 miles of trail across the hillside, and the remaining 1.00 mile of trail would be constructed on a series of abandoned logging roads and/or abandoned logging trails as well as the original Pratt Trail that parallels the Pratt River.

The site-specific proposed reconstruction and relocation is as follows:

Beginning at the Middle Fork Trailhead, the first 0.40 miles of the trail would follow the original trail-tread. At this point, the original trail turned northwest and was constructed immediately adjacent to the Middle Fork, crossed Rainy Creek, and then continued paralleling the Middle Fork Snoqualmie. With this alternative the trail would deviate from the original tread, turn southeast, construct new trail for approximately 0.10 miles and cross Rainy Creek above the original crossing, and then run southwest for approximately 0.20 miles until the new trail again rejoins the original tread. Once rejoining the original tread, the trail would be reconstructed for approximately 0.55 miles until the trail reaches an unnamed, intermittent stream that runs from south to north and eventually flows into the Middle Fork Snoqualmie River. Once the tread crosses this intermittent stream, the trail leaves the original route and would be relocated. This segment of trail would travel approximately 0.65 miles across the hillside until it reaches an abandoned series of logging roads. Once joining the abandoned logging roads/trails, it would follow these routes for an additional 1.00 miles until it again ties in with the original tread and the Lower Pratt River Trail (near the confluence of the Pratt and Middle Fork). The remaining 0.35 mile of reconstruction would be part of the original Pratt Trail.

It is estimated that within the first 1.40 miles of trail, approximately 0.80 miles of trail would be within Riparian Reserve(s) of the Middle Fork, Rainy Creek, and or an unnamed intermittent tributary. The next 1.55 miles of trail would not be in riparian with the remaining 0.30 miles being within the Riparian Reserves(s) of either the Middle Fork and/or the Pratt River.

Though the Pratt Trail has not been maintained in several years, consistent use of the first 1 – 1 ½ miles of the trail by the public have kept the tread open and fairly clear of brush. Additionally, at approximately the 1-mile mark, many user built trails have been created that access the shores of the Middle Fork of the Snoqualmie River. These trails can have an impact on riparian resources through vegetation removal and soil erosion of trails that were not designed. Thus, aside from the reconstruction/relocation of the main trail, Alternative 2 would build a side trail that would provide access to a gravel-bar along the Middle Fork Snoqualmie River. The side-trail location would be between Rainy Creek and the unnamed tributary at a point where the trail is closest to the river (Refer to Alternative 2 and 3 Project Map). This access trail would be perpendicular to the main trail, would be approximately 300 to 400 feet in length, and would provide a way to

access points of interest along the Middle Fork. Once this new access trail is constructed, all of the user built trails would be eliminated and “storm-proofed” so that the potential for erosion would be lessened, the user built trails could be restored to natural riparian conditions, and create a condition where native vegetation can once again grow in these areas.

As in the past, use on the Pratt Trail would continue to include hiker and stock.¹¹ Thus, under this alternative, the 3.25 miles of the Lower Pratt River Trail would be rebuilt so that it could withstand the wear and tear that animals can have on such trails. Typically, the tread would be approximately 18” to 24” feet in width with brush being cleared approximately 4 feet on either side of the trail and trees would be limbed up approximately 10 feet high as measured from the height of the tread. The maximum grade that would be used is 15 – 20% depending on the soil types that are encountered. If the soils are erosive, the grade may be reduced to Zero – 3%. The trail location runs through a variety of soil types including possibly *lacustrine soils (clay)*. Trail reconstruction/relocation and design techniques used to minimize impacts to these soils include the installation of one or all of the following: puncheon, turnpike, drainage ditches, and native borrow material, or imported gravel surfacing. The decision with regard to the appropriate structure would be made on a site-specific basis.

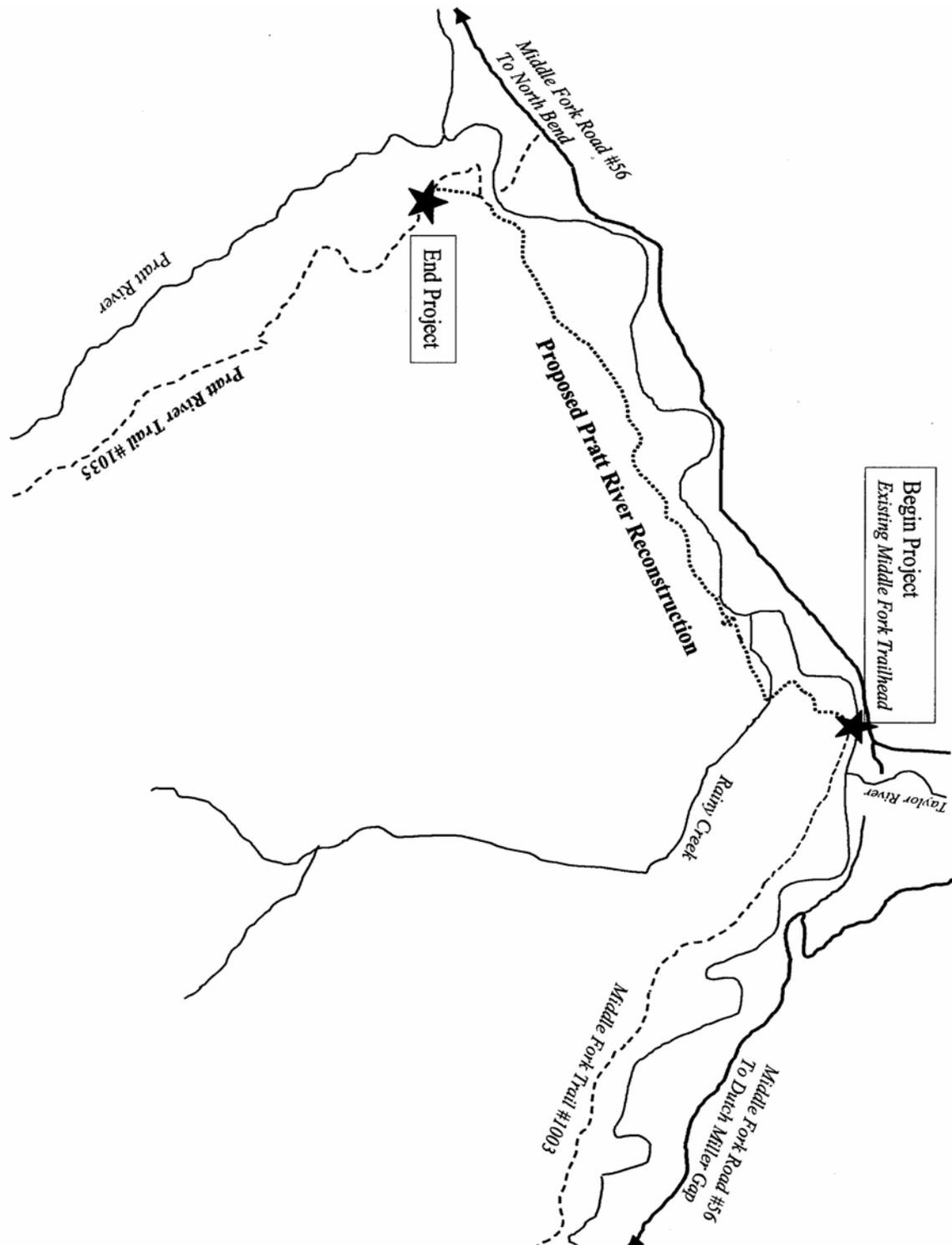
Lastly, the trail would cross Rainy Creek where a crossing would have to be developed. If funding were available at the time of construction, a bridge approximately 65 feet in length would be built at the Rainy Creek crossing as well as a bridge being built over an unnamed intermittent stream. These bridges would be constructed using standard techniques and materials. The bridge stringers could be steel I-beam with wooden decking and wooden handrails. The beams would be placed on concrete footings that would be outside of the floodplain and high enough so that any flood events would not affect the structure. If funding were not available, a “ford” would be built across both channels. The approaches would be sloped gently down to the waters-edge and would be armored with native rock.

Alternative 3—Reconstruct or Relocate for use by Hikers only

This alternative is the same as Alternative 2 in that the trail would be reconstructed/constructed in the same location however, with Alternative 3, the trail would be rebuilt/relocated so that it is suitable for hikers only. All of the specifications for the trail would be the same with the following exceptions: 1) Horizontal and Vertical clearing widths would not be as wide or tall. The trail tread would not have to be armored to handle the weight of horses as well as the bridges not having to be built to withstand the added weights. Bridge design would only be for heavy snow-loads.

¹¹ *Stock includes any animal that is typically used as a pack animal (e.g. horse, goat, mule, and llama).*

Figure 4: Alternative 2 and 3 Project Map



Mitigation Measures

Cultural Resources

- The relocated segment of trail where it crosses Rainy Creek may affect a segment of collapsed wooden waterline. If this waterline crosses the trail, a segment of the waterline (a 10' section) is to be moved out of the way and laid parallel to the remaining undisturbed line enabling the trail to be rebuilt. The goal is to maintain the integrity of existing structures, such as the waterline, while being able to complete the project. Though a section of waterline may be moved out of the trail, the entire structure would still be in its original context thus preserving this feature on the landscape.

Mitigation Effectiveness: Past experience has shown that a minor disturbance to a linear cultural resource feature on the landscape does not affect the integrity of the feature, thus providing for future analysis and interpretation of the cultural resource.

- If a previously unidentified resource is discovered during project implementation, or if an identified resource is affected in an unanticipated way, the Forest Heritage Specialist shall be notified. The Forest will then fulfill its responsibilities in accordance with the Programmatic Agreement between the Advisory Council on Historic Preservation (ACHP), Washington State Historic Preservation Office (SHPO), and United States Department of Agriculture–Region 6 Forest Service (1997 Programmatic Agreement).

Botany

- The round leaf orchid, *Platanthera orbiculata* occurs along the trail route. Have a botanist identify and mark (flag) any examples of this species that could be affected during trail layout and prior to the beginning of reconstruction activities. Avoid physical disturbance of this orchid by routing the trail at least 20 feet slope distance from each plant.
- To ensure that project activities would avoid threatened and endangered (T&E) plant locations have a botanist identify and mark known plant locations prior to final trail design. Once identified, reroute the trail as necessary.

Mitigation Effectiveness: Avoidance is a common practice used on the Forest and has proven to be highly effective at providing protection to T&E plants.

- If any previously undiscovered vascular plants, bryophytes, lichens, or fungi are encountered at any time prior to or during project implementation, work is to cease until a botanist is consulted and necessary mitigation measures are enacted (USDA Forest Service 1990b p. 4-127).

Mitigation Effectiveness: This method of detection is effective in locating species of plants thus being able to complete the affected project yet have a minimal effect on any located species.

- The trail contractor must ensure that all machinery and equipment (including hand tools and trailers used for hauling) are free of soil and vegetative material before entering on to Forest Service lands. Designated Forest Service personnel may inspect machinery and equipment as necessary (USDA 2005a).

- If bare soils are to be seeded for erosion control, all seed mixes will be locally collected native species or those desirable non-native species recommended for use on the National Forest (Potash and Aubry, 1997).

Mitigation Effectiveness: Experience has shown that by cleaning equipment and being selective of the types of seed used on National Forest lands, that the threat of spreading noxious weeds is greatly reduced.

Soils

- Reconstruction and relocation of the trail(s) is to follow regional standards as follows: Standard specifications for the Construction of Trails, EM-7720-103 and Standard Drawings for the Construction and Maintenance of Trails, EM-7720-103.
- Standard trail and design techniques to be used if lacustrine (clay) soils (as well as other sensitive soils) are encountered include the installation of puncheon, turnpike, drainage ditching, and native-borrow or imported gravel surfacing. The decision on the type of appropriate trail structure is made on a site-specific basis. The final design of this trail may include quantities of all of the above.
- Reduce trail grades (measured in percent) through sensitive soils (including clays). Out-slope the trail bed as much as the side-slope allows (typically 3.0%). Segments of trail that cross flat areas are to be crowned using imported and crushed rock (typically 5/8" minus) that is to be mechanically compacted. If necessary, use coarser rock (3" minus) as a base in wetter areas and if necessary, filter cloth to separate surfacing material from the sub-grade.

Mitigation Effectiveness: Experience in constructing facilities in the Middle Fork drainage has shown that the construction methods described above are effective in mitigating effects to clay soils. Projects that have utilized these techniques include construction of the Middle Fork Trail (from the Middle Fork Bridge, east towards Goldmyer Hot springs) and construction of the road, camping areas, picnic areas, and day-use area in the recently constructed Middle Fork Campground.

- If the hiker/stock alternative is selected, close the trail to stock uses for one year following reconstruction to allow "hardening" of the tread. Following the first year, implement annual closures during the wet seasons as necessary to protect the trail.

Mitigation Effectiveness: Past experience has shown that by closing trails to use (other than hiking) for periods of time greatly reduces adverse effects not only to the trail but to the environment. Periodic closure reduces the costs of maintenance and lengthens the life of the trail and aids in preventing erosion and soil displacement.

Recreation

- Discourage use of the original trail not being rebuilt and all user-built trails by obscuring the trail segments with debris generated from brush clearing and trail reconstruction. Material should be placed perpendicular to the unused trail and parallel to the existing trail to act as a retaining structure or a drainage structure.

Mitigation Effectiveness: Past experience has shown that obscuring trails with native materials is an effective method of directing use onto the newly rebuilt trail and away from segments that are being rehabilitated.

- Place water bars in the trail segments that are not to be used to control run-off and soil erosion. Once water bars have been installed, seed and mulch bare soils on the trail segments or user-built trails that are no longer to be used. Use seed as defined in the Botany mitigation measures listed above.

Mitigation Effectiveness: Past experience has shown that this method of trail rehabilitation is effective in reducing the potential for soil disturbance and to permanently obscure trails that are being rehabilitated.

- If deemed necessary, install signs prohibiting horses from utilizing the area around Pratt Lake. If needed, designate an area away from the lake where horses can be tethered for the night.

Mitigation Effectiveness: Past experience has shown that in general, the majority of people who use horses on National Forest Lands follow all regulatory signs and requirements. However, on occasion, some forest users will ignore such controls and involving law enforcement may become necessary.

- Lop and scatter any slash generated from the implementation of this project along the length of the trail or at the entrances to trail that is not being used; burning is not being considered in this proposal.

Mitigation Effectiveness: Past experience has shown that lop and scatter is a cost effective and esthetically pleasing method of slash disposal (versus piling and burning or others).

If deemed necessary for public safety, the felling of hazard trees within riparian reserves is allowed (RA-2 ROD C-37). Leave all trees in place after felling.

Fisheries

- All projects potentially affecting the beds and banks of stream, 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 Snoqualmie sub-watershed, the timing period is July 15 – October 31 (Forest BA standard management practice for fish).
- Trails shall 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 (Forest BA standard management practice for fish).
- Use of treated wood shall follow best management practices for treated wood in western aquatic environments (WWPI 2000). (Forest BA standard management practice for fish)

- 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 (Forest BA standard management practice for fish)
- To educate the recreational user about the effects of rock dams on fish, WDFW signs addressing this issue should be posted at the Middle Fork Campground and at or along the trails near the river(s) (Forest BA standard management practice for fish).
- If blasting is needed, effects to fish from in-water vibrations should be minimized by the following: a) Avoid surface charges to minimize potential addition of blasted materials to fish-bearing waters. b) Divide and separate charges with appropriate lengths of detonation cord to achieve delays of approximately 50 milliseconds between the charges (Between 25-100msec, with a target of 50msec). Use the MBS blasting guidelines attempting to not exceed the potentially lethal distance and charge weight (Forest BA standard management practice for fish).
- There shall be no excavation, filling, or disposal of material within the wetted perimeter of the stream (Forest BA standard management practice for fish).
- Have hazardous spill clean-up materials on-site (Forest BA standard management practice for fish).

Wildlife

- To minimize potential noise impacts to the northern spotted owl and marbled murrelet, noise-generating activities (power saws and blasting) will only be allowed between August 6 through March 31 and only permitted two hours after sunrise and must cease two hours before sunset. (2003 Forest Programmatic Biological Assessment)
- Coarse woody debris already on the ground should be retained and protected to the extent possible from disturbances during trail reconstruction/relocation (USDA USDI 1994, p. C-40).
- Snags are to be retained along the trail unless they are a potential threat to public safety (USDA USDI 1994, p. C-42).
- Use of explosives within suitable habitat during the nesting season will incorporate guidelines in: "Guidelines for Blasting on National Forest Lands in Relation to Disturbance to Wildlife."

Lands and Facilities

- During trail reconstruction/relocation activities, place signs at appropriate locations near the Middle Fork trail-bridge to warn forest users of project activities.

Mitigation Effectiveness: Warning users that they may be entering a work zone within the project area heightens user awareness and reduces the risk of accidents. This practice is highly effective and routinely used to warn users of the hazards of reconstruction work on narrow Forest Service trails.

Monitoring

Heritage: During reconstruction, have a Heritage Resource Tech. or Archaeologist observe removal of a segment of wooden water pipe (if necessary). Periodically check progress to ensure no further disturbance occurs.

Measure: Ensure that a minimum amount of pipe is disturbed.

Botany: Prior to project implementation, have a botanist mark locations of specific species of plants so that they can be avoided during implementation. Periodically inspect to ensure no other example(s) is present.

Measure: Ensure that all marked plants are left undisturbed.

Reconstruction: Ensure that all requirements (mitigations and best management practices are listed in the EA are included in the reconstruction contract and that they are adhered to during reconstruction activities.

Measure: Ensure that a Contracting Officer or Contracting Officers Representative is familiar with all contract requirements and that regular inspections occur on-the-ground ensuring that all requirements are implemented.

Table 1: Comparison of the Alternatives

	Alternative 1–No Action	Alternative 2–Reconstruct or Relocate for Use by Horses or Hikers	Alternative 3–Reconstruct or Relocate for Use by Hikers only
<p>Potential Conflicts between User Groups: Length of trail in Riparian Reserves and the # of stream crossings Projected number of users by various type; Results of a study on the Middle Fork Trail.</p>	<p>The entire trail is within Riparian Reserve. There are two unimproved main stream crossings (Rainy Creek and unnamed channel). There are multiple user built trails along the main trail and down to the Middle Fork. No maintenance on the trail would be completed.</p> <p>The current number of users of this segment of the Pratt is unknown since no studies have been completed for this segment, nor can the users be determined under this alternative since no studies would be initiated.</p> <p>Pack animals are currently allowed however, pack animals are not being used due to the lack of maintenance and because some of the trail is missing.</p>	<p>The first 1.2 and the last 0.35 miles are with in Riparian Reserves. User built trails would be rehabilitated. Erosion control measures and avoidance of sensitive soils minimizes or eliminates soil displacement. One and possibly two bridges may be built.</p> <p>Studies for the M F Trail indicate that 18-19 visitors (hikers) use the trail per day. It is anticipated that use of the lower Pratt would be similar but could be higher within the first 4.0 miles because 8.0 miles round trip appears to be the average user’s day-use limit.</p> <p>As shown in the study for the Middle Fork Trail, for every 167 users, one or two may have a pack animal. Use of the lower Pratt would be similar but possibly less since there are fewer amenities than on the Middle Fork Trail.</p>	<p>The trail in Riparian Reserves is the same as Alternative 2.</p> <p>Trail use (hikers) is anticipated to be the same as Alternative 2.</p> <p>No pack animals would be allowed under this alternative.</p>
<p>Potential Effects to Wildlife and their Habitats: Estimate of the amount of Grizzly bear habitat that could be affected; Total amount of spotted owl/murrelet habitat and LSR that could be affected.</p>	<p>Under Alternative 1, reconstruction/relocation would not occur thus, there would be no additional effects to Grizzly habitat due to trail improvements. Users would still use the trail especially from the bridge to Rainy Creek thus, current disturbance would still occur.</p> <p>There would be no effect to the spotted owl or murrelet from implementation of Alternative 1. Effects from current use for grizzly and LSR would continue at existing levels.</p>	<p>The Middle Fork ATM increased Grizzly Early Core habitat by +3,460 acres and +2,385 acres of Late Core habitat. With Alternative 2, habitat would be reduced by 1,036 acres of Early Core habitat and 1,010 acres of Late Core habitat. Thus, there would be “no net loss of habitat.”</p> <p>No owl or murrelet suitable habitat would be removed. There is “No Effect” to critical habitat.</p> <p>No trees over 70 years of age would be removed. Effects to the LSR are neutral.</p>	<p>Same as Alternative 2</p>

	Alternative 1–No Action	Alternative 2–Reconstruct or Relocate for Use by Horses or Hikers	Alternative 3–Reconstruct or Relocate for Use by Hikers only
<p>Potential Effects to Riparian Reserves: Estimate of the length of trail in the Riparian Reserves; Total amount of acres that are affected through soil disturbance or vegetation removal.</p>	<p>The entire original/existing trail is in Riparian Reserves and would remain unchanged under this alternative. User built trails would remain and would not be eliminated. Implementation of this alternative would not further affect soils nor remove vegetation. However, soil disturbance and possibly vegetation removal would continue to occur due to user built trails. Existing erosion levels would continue to occur.</p>	<p>The first 1.20 miles of trail, and the last 0.35 mi. would be in riparian of the Middle Fork, Pratt, or Rainy Creek. Removing user built trails, and trail placement, trail design, implementation of erosion control measures, and avoidance of sensitive soils ensures that the potential for soil displacement is minimal. A total of 0.36 acres of bare soil would be exposed and 1.45 acres of brush and saplings removed, in riparian areas, all spread across 1.50 miles of trail.</p>	<p>Same as Alternative 2</p>
Other Issues			
<p>Potential Effects to the Alpine Lakes Wilderness: Estimated number of users that would enter the wilderness both from the Pratt Lake area and from the Middle Fork area. The potential for Mt. Bikes entering the Pratt area via the newly reconstructed trail.</p>	<p>Implementation of this alternative would not increase the number of users within the Pratt drainage whether it is in the Alpine Lakes Wilderness or not. However, the existing trail would still be used (at least to Rainy Creek) and user built trails would still be used and more than likely new ones would be created over time. This is true whether this area is in wilderness or not. There would be no changes to use levels on other trails because no other options (the Pratt Trail) would be available.</p>	<p>If Alternative 2 were implemented, it is anticipated that use would probably increase in the Pratt drainage. Current use of the Pratt trail is not known however, once reconstructed, it is anticipated that use would be approximately 18 -19 users per day (the same as Middle Fork. This is true whether the area is included in the wilderness or not. Even though access to the Pratt trail along the Pratt River would be easier, it is not expected that more users would access Pratt Lake from the Middle Fork because it is easier to access the Pratt Lake area from I-90. Though not allowed, once the trail is rebuilt, bikes could potentially enter the Pratt area. However, bike users on the Middle Fork Trail do comply with current restrictions and it is anticipated that bike users would comply with the closure on the Pratt.</p>	<p>Same as Alternative 2</p>

	Alternative 1–No Action	Alternative 2–Reconstruct or Relocate for Use by Horses or Hikers	Alternative 3–Reconstruct or Relocate for Use by Hikers only
<p>Potential Effects to Soils: The amount of trail that would be built in or around this soil type (clay) and the use of proven mitigation measures that minimize erosion potential.</p>	<p>No projects would occur with this alternative thus, this alternative would have no effect on soils, however the existing trail and user built trails would remain. The potential for erosion and soil displacement on these treads is greater than on a designed and maintained trail.</p>	<p>Since no extensive excavations have been completed along the trail route, it is unknown exactly where clay soils exist (if any). However, approximately the last 1.0 mile of trail would be on abandoned railroad grades or truck road(s). Clays on these routes is not an issue since the roads/grades are rocked or the grade has been raised and encountering clay soils is not likely. For the first 2.25 miles, trail placement, trail design, and reconstruction methods would alleviate any concerns with these types of soils.</p>	<p>Effects are essentially the same as with Alternative2 however, since this is a hiker only alternative, the trail need not be reconstructed to as high a standard as trails that would accommodate a horse. There is less potential for problems with clays in the future because horse traffic may break down the trail faster than hiker only.</p>
<p>Law Enforcement: The types of measures used to deter unauthorized use such as bikes and stock on closed trails.</p>	<p>Other than having a co-op Sheriff's Deputy, the Snoqualmie Ranger District has lacked a Law Enforcement Officer. Thus, the district has had difficulty enforcing many laws and regulations governing National Forest Lands. However, beginning in 2008, the District will have a law enforcement officer. Thus, the Forest Service presence would increase within this drainage for the purpose of law enforcement activities. With the Lower Pratt River Trail, there is always the possibility that a bike would be found on the reconstructed trail however, with a law enforcement presence, the district will be able to effectively deal with the problem in a timely manner.</p>	<p>Same as Alternative 1</p>	<p>Same as Alternative 1</p>
<p>Economics: Costs of maintaining trails with different users groups.</p>	<p>With implementation of this alternative, no monies would be spent on maintenance of the 3.25 miles of trail in this proposal. However, monies would continue to be spent for maintenance on the Pratt Trail that parallels the Pratt River.</p>	<p>Hiker/Animal, non-wilderness = \$1,700/Mi. Hiker/Animal, wilderness = \$2,100/Mi.</p>	<p>Hiker, non-wilderness = \$1,450/Mi. Hiker, wilderness = \$1,800/Mi.</p>

Chapter 3 - Affected Environment and Effects of Implementation

Introduction

This chapter includes a summary of the physical, biological, social, and economic environments of the affected project area (the baseline or existing condition) and the expected effects or changes to those environments if any of the alternatives were to be implemented. This chapter provides the scientific and analytical basis for the comparison of alternatives presented at the end of Chapter I of this document. Specialists reports are incorporated by reference and all specialists contributed directly to the preparation of this final document.

This chapter is arranged by resource, with the affected environment discussion presented first, followed by the estimated project effects (direct and indirect), and then estimated cumulative effects. Cumulative effects are those effects on the environment resulting from the incremental effect of the proposed trail reconstruction/relocation when added to the effects of other past projects (that have residual or on-going effects); the estimated effects of other current projects; and the effects of reasonably foreseeable future activities (federal and non-federal) (40 CFR Parts 1500-1508). See the appendices for more on the cumulative effects analysis completed for this project. 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.

Recreation Affected Environment

Management activities have occurred in the Middle Fork and Pratt River drainages since the early 1900s, if not sooner. The earliest recorded historic usage was between 1905 and 1914 where early maps indicate the existence of trails along the Middle Fork and Pratt Rivers. There is the possibility that Native Americans created these trails but there is no recorded evidence that this was the case. In addition to Forest Service Administrative use, miners and trappers who typically utilized animals to transport supplies and other goods could have used these trails as well as those herders who grazed sheep and cattle on National Forest lands.

Beginning in about 1920, the North Bend Lumber Company began a logging railroad program up the South and Middle Fork Rivers and by 1922; the main track had almost reached the mouth of the Pratt. In 1935, the North Bend Timber Company¹² began to build a railroad bridge across the Middle Fork River to access the Pratt drainage. Logging in the Pratt continued off and on during the depression and by 1941, logging had reached near Pratt Lake. Around this same time, the company was beginning to pull out the track in the Pratt and by 1942; Weyerhaeuser was allowing the logging company to convert railroad grades in the lower Middle Fork to truck roads.

¹² *North Bend Timber Company incorporated in 1923.*

There is no reference of when logging actually ended in the Pratt drainage but it is estimated to be around 1942–1944. Another disturbance that occurred in the drainage was on August of 1940 when a fire began in a railroad bridge and resulted in a 1,500-acre fire that burned for about one week (Pratt River Logging Camp Evaluation, 1990, pages 196 – 201).

By 1936, the Civilian Conservation Corp (CCC) was building the first truck road up the Middle Fork (concurrent with railroad logging) and by this date, they had constructed approximately 7 miles of road. By 1939, the CCC road was within 10 miles of Goldmyer Hot Springs and they planned to reach the Hot Springs by the fall of that year (Pratt River Logging Camp Evaluation, 1990, pp. 199-200).

Through railroad and road construction, the original trails along the Middle Fork River, the Taylor River, and the Pratt Rivers were mostly obliterated. However, in regards to trail construction/reconstruction there are no records indicating the chronology of events during or once railroad logging had been completed. Through personal knowledge and through personal conversations with long-time District employees, it is known that lookouts and guard stations were still active up until the late 1960s. Thus, to be able to continue accessing the upper reaches of areas such as Pratt Lake, Dingford Creek, etc. from the Taylor River Guard Station/Ranger Station, trails were rebuilt. It is suspected at this time that the Middle Fork Trail was abandoned South of the Pratt River but the Middle Fork Trail and Lower Pratt River Trails were rebuilt to access Pratt Lake from the Taylor River Guard Station.

By the end of the 1960s, the majority of lookouts and guard stations across the United States were abandoned due to advanced technologies in fire detection and the construction of roads in the National Forests. This is the approximate time that the Forest Service stopped maintaining the Lower Pratt River Trail between the now Middle Fork trailhead/bridge and the Lower Pratt River Trail. Though this segment of trail is not maintained, it is still a listed trail and is still in the trail inventory. However, the trail that parallels the Pratt River has been maintained through the years and maintenance did occur in the summer of 2007. Though the Lower Pratt River Trail has not been maintained, there is no adequate access to the trail from the Middle Fork Road. The only option is to hike from Pratt Lake or to cross the Middle Fork Snoqualmie River during low flows. At one time, there was a footbridge across the Middle Fork (refer to Figure 3 on page 28 in this document) but it washed out in the 1970s and was never replaced.

The Middle Fork Trailhead and the bridge across the Middle Fork River were constructed in approximately 1988 and at around the same time, the Middle Fork Trail from the bridge up and past Goldmyer Hot Springs was rebuilt. In the environmental assessment written to build the trail bridge, the plan discussed rebuilding the trail down to the Pratt Trail (EA, 1988).

The main purpose of all of the trails that were initially built or used by the Forest Service were mainly for suppressing fires. As recreation activities became popular in the early 1900s these trails began to serve a dual purpose where they were used by the general public as well as for fire suppression. When these trails were being built and used by the Forest Service, the main method of transporting equipment was by pack animal. Thus, all trails were designed to handle the extra

weight and wear-and-tear inherent with pack animals. Over time, as other planning documents are completed, the trail use designation has changed. However, in the case of the Middle Fork and Lower Pratt River Trails, the use has always been and is still designated as hiker/stock. In 2005 the Middle Fork Snoqualmie River Watershed Access and Travel Management Plan (ATM) EA was written. In this ATM, the Middle Fork Trail from the Middle Fork Trailhead and heading east designated the use of this segment of trail as being hiker/stock/mountain bike. However, mountain bikes were to only be on the trail on an experimental basis on odd days of the week. With the proposal in this document, the trail use designation would be hiker/stock, with no mountain bike use allowed. Further, the reconstructed segment of the Middle Fork Trail is under closure order 06-05-FO-06-01 for stock use. With this closure, stock use is limited to the dates of between July 1 and October 31. Likewise, if stock is allowed on the reconstructed/relocated Pratt Trail, the same restriction for stock use would apply.

The following table lists approximately 88 miles of trail in and around the Alpine Lakes Wilderness. This table lists the approximate mileage and the percentage of use for each of the listed trails:

Table 2: Trail Length and Percentages of Use (Refer to footnote 14)

Trail Name	Use Designations	Approximate Miles	Approximate % of Use
Middle Fork Snoqualmie River, Snoqualmie Lake Trail, CCC/Taylor River Trail	Hiker/Stock/Mountain Bike	40 Miles	45% of the users that enter the Middle Fork drainage and wish to hike, use these trails
Nordrum Lake, Marten Lake, Kaleetan Lake, High Lakes, Williams Lake	Hiker Only	16 Miles	18% of the users that enter the Middle Fork drainage and wish to hike, use these trails
Dingford Creek, Hester Lake, Dutch Miller Gap, Pratt River	Hiker and Stock	32 Miles	37% of the users that enter the Middle Fork drainage and wish to hike, use these trails

In 1999, a paper titled “Final Report, Alpine Lakes Wilderness Usage Data” was completed. The data in this paper gathered all of the information that was contained on self-issue permits at the trailheads of Dingford Creek, Dutch Miller Gap, and the Taylor River trailheads. When users fill out this self-issue wilderness permit, they are asked to provide names, date, number of persons, number of stock, etc. The presentation of this data is not intended to infer that this is a complete study. From previous experience, it is estimated that approximately 80% of trail users fill out the Wilderness Pass thus, the usage could be higher but it is estimated that the numbers displayed are indicative of trail use (Refer to the recreation report in the Analysis File for a complete list of the weekly use statistics). The following table summarizes use data from the use period of May 30 through October 31.

Table 3: Trail Usage in Middle Fork

	Total Users	Avg. Users/Day¹³	Total # of Stock
Dingford Creek	378	2 – 3	1
Dutch Miller	334	1 - 2	2
Taylor River	1159	6 - 7	1
Total or Average	1871	3–4	4

As can be seen from the previous table, of the 1,871 users of the trail that registered, only four pack animals were present. Statistically, this indicates that for approximately every 467 users, one or two users would have stock. These statistics are repeated on other trails across the district as shown in the following table:

Table 4: Trail Usage on the District

	Total Users	Avg. Users/Day¹⁴	Total # of Stock
Pacific Crest	3,860	22-23	8
Pratt Lake	6,198	36-37	9
Bare Mountain	495	2-3	1
Denny Creek	9,836	57-58	41
Gold Creek	787	4-5	6
Lennox Creek	253	1-2	0
Mason Lake	2,237	13 -14	3
Snow Lake	1,1808	69 -70	12
Total or Average	35,474	208-209	80

As can be seen from this table, of the 35,474 users that registered, only 80 pack animals were present. Statistically, this indicates that for approximately every 443 users, one or two users would have stock.

During 1999, there were no statistics available or collected at the Middle Fork Trailhead. However, in calendar year 2006, a graduate student compiled trail use data on the Middle Fork Trail in preparation of a thesis for their Masters Degree. The collected data is as follows:

¹³ Based on a 170 day season

¹⁴ Based on a 170 day season

Table 5: Middle Fork Trail Usage

	Total Users	Total # of Stock	Total # of Bikes
Middle Fork	3059	25	294
Dingford Creek	392	0	159
Dutch Miller Gap	206	0	49
Total or Average	3,657	25	502

The statistics displayed in Table 4 was gathered by requesting users to fill out a registration form developed by the graduate student. These forms were dispersed at

the three trail heads indicated in the table. All users in this table were accessing the Middle Fork Trail system and were not going the opposite direction towards the wilderness. It is estimated that approximately 80% of the users did fill out this form. Statistics were gathered from April until October 31, which totals 199 days. Thus, the average number of users per day on the Middle Fork Trail system equals approximately 18-19 users per day. As can be seen from Table 4, of the 3657 users of the trails that registered, only 25 pack animals were present. Statistically, this indicates that for approximately every 146 users, one or two users would have stock. Further, during this same timeframe, 502 bikes used this trail system indicating that that every seventh user would have a bike¹⁵.

As with all of the trails that are either in the I-90 corridor or in the Middle Fork drainage, the odds that a hiker would encounter stock animals along the Middle Fork Trail is low and if stock is encountered, the number of animals would also be low. If a user is averse to being around animals on the Middle Fork Trail system, that person can observe what types of vehicles are in the parking area to discover if stock arrived via trailer. If a trailer is present, then the user can opt to use a different trail in the area.

Mountain bikes are allowed on the Middle Fork Trail during odd days of the week and from April 15 through October 31. As indicated in Table 4, a great number of mountain bikes used the Middle Fork Trail system and the chances of encountering a bike on odd days are almost certain. However, none of the alternatives in this document would allow bike usage on the Lower Pratt Trail. Based on the experiences of seasonal trail workers on the Ranger District, bike users are compliant with restrictions implemented by the Middle Fork ATM. Thus, the odds of encountering bikes on the Pratt Trail are very small. Further, in the past, the Snoqualmie Ranger District lacked a Federal Law Enforcement Officer presence on the Ranger District. Due to this, the district was very limited in the capability to enforce many laws and regulations governing National Forest Lands. However, over these years, the Forest has had an agreement with a deputy sheriff to assist in law enforcement on the district. However, as of 2008, the Snoqualmie Ranger District has a law enforcement officer that is capable of enforcing Federal laws and regulations across the district. Thus, the presence of the Forest Service will increase within this drainage for the purpose of law enforcement activities. With the Lower Pratt River Trail, there is always the possibility that a bike would be found on the reconstructed trail however, with a law enforcement

¹⁵ Bikes are allowed every odd day during the month or essentially, one-half the days during the time the statistics were gathered.

presence and the users complying with restrictions, the district will be able to effectively deal with any problem in a timely manner.

For the purposes of this document, “low elevation” facilities are those that are below 1,500 feet in elevation and they are generally free of snow for most of the winter. The following table is a list of those trails that can be reached from the Middle Fork road and if they are below 1,500’, the table lists the mileage of that trail or segment:

Table 6: Trail Name and Usage

Trail Name ¹⁶	Trail Segment	Trail Below 1,500 feet?	Mileage
Middle Fork Snoqualmie River	1003, 1003.1, 1003.2	Yes	7.0 Miles
Snoqualmie Lake Trail	1002	Yes	1.5 Miles
CCC/Taylor River Trail	Currently Being Built	Yes	2.0 Miles
Nordrum Lake	1004, 1004.01	No	0 Miles
Marten Lake	1006, 1006.1	No	0 Miles
Kaleetan Lake	1010	No	0 Miles
High Lakes	1012	No	0 Miles
Rock Creek	1013.3, 1013.32	No	0 Miles
Williams Lake	1030.1	No	0 Miles
Dingford Creek	1005, 1005.01	No	0 Miles
Hester Lake	1005.1	No	0 Miles
Dutch Miller Gap	1030, 1030.01	No	0 Miles
Pratt River	1035, 1035.1	Yes	4.5 Miles ¹⁷

Through public comments, a concern has been voiced that there are not enough trails that are snow free during most of the winter. The previous table indicates those trails in the immediate area that are below 1500’ and are generally snow free and can be used during the winter. As indicated by the table, reconstruction/relocation of the Pratt Trail would increase the ease of access and increase the availability for 4.5 miles of low elevation trail.

¹⁶ Refer to pages 2-16 and 2-17, Middle Fork Snoqualmie River Access and Travel Management (ATM) EA.

¹⁷ The 3.25 miles of trail along the Middle Fork and approximately 1.25 miles up along the Pratt River.

Mt. Baker-Snoqualmie National Forest Lower Pratt River Trail Reconstruction and Partial Relocation EA

The following table lists trails on the district along with their primary objective (use) (refer to Appendix E of the Mt. Baker-Snoqualmie National Forest, Forest Plan 1990).

Table 7: Primary Objectives for Trails

Trail Name	Extent	Primary Objective
Bare Mountain	Road 57 to Bare Mountain	Hiker
Denny Creek	Road 5830 to Melakwa Lake	Hiker
Dingford Creek	Road 5620 to Myrtle Lake	Pack and Saddle
Dutch Miller	Middle Fork to Dutch Miller Gap	Pack and Saddle
Gold Creek	Loop Route	Hiker
Lennox Creek	Road 5700210 to Anderson Lake	Hiker
Mason Lake	Road 9031 to Trail 1009	Hiker
Pratt River	Middle Fork River to Pratt Lake	Pack and Saddle
Pratt Lake	Road 9034 to Pratt Lake	Hiker
Snoqualmie Lake	Road 5630 to District Boundary	Pack and Saddle
Snow Lake	Road 9040 through the Wilderness	Pack and Saddle

The following table lists some of the same trails as above however, the primary objective (use) has been updated in the following National Forest Order: “National Forest System Trails” 7/3/06, Order Number 06-05-FO-06-01.

Table 8: Updated Use Objectives

Trail Name	Trail Use	Trail Name	Trail Use
Bare Mountain	Llama/Hiker	Lennox Creek	Llama/Hiker
Denny Creek	Llama/Hiker	Mason Lake	Llama/Hiker
Dingford Creek	Pack/Saddle/Llama/Hiker	Pratt River	Pack/Saddle/Llama/Hiker
Dutch Miller	Pack/Saddle/Llama/Hiker	Pratt Lake	Llama/Hiker
Gold Creek	Llama/Hiker	Snoqualmie Lake	Llama/Hiker
Snow Lake	Llama/Hiker		

Through public comments, a concern surfaced in that once the Pratt Trail has been rebuilt/relocated and the use objective remains the same (Alternative 2), that stock would be able to access the Pratt Lake shoreline thus degrading the surrounding vegetation. As shown in the previous two tables, the Lower Pratt River Trail is open to Pack/Saddle/Llama/Hiker up to Pratt Lake while the Pratt Lake Trail is open to Llama/Hiker (no pack/saddle animals). Though animals can access the Pratt Lake shoreline, under Forest Order 94-001 (described below) camping is not allowed within ½ mile of Pratt Lake as well as other lakes in the Alpine Lakes Wilderness. This order is to protect the environment around this lake as well as others. To ensure compliance with this order, the Snoqualmie District employs Wilderness Rangers every summer season for the purpose of education and enforcing compliance.

Under Alternative 3, the Lower Pratt River Trail would change to Hiker only however, this alternative would not change the designation for the Pratt Lake Trail (Llama/Hiker) thus, animals would still be able to access the shoreline of Pratt Lake via I-90 regardless of the decision in this document. Further, if Alternative 3 is selected for implementation, a minor forest plan amendment would have to be approved that would change the primary use objective for the Pratt Trail 1035 from code 2 (Pack and Saddle) to code 1 (Hiker) (Refer to the Forest Plan, Appendix E, page E-12 and E-21).

There is a Forest Order (Order 94-001, 5/20/94) that lists Entry and Use Restrictions for the Alpine Lakes Wilderness. Under this order: “...*the following acts are prohibited in order to protect the ecological integrity of lakes, streams, forests, meadows, and to enhance the wilderness character and resources of the Alpine Lakes Wilderness...*” Under Item 3: “*Camping at other than a designated camp site within ½ miles, horizontal distance, of the areas listed in Exhibit B, 23 CFR 261.38 (e).*” As stated in Exhibit B: “*Camping only at designated sites within ½ miles of the following locations:*” Gem Lake, Gravel Lake, Island Lake, Lower Tuscohatchie Lake, Mason Lake, Melakwa Lake, Olallie Lake, Pratt Lake, Rainbow Lake, Snow Lake, Talapus Lake, and Williams Lake.

Alternative 1 (No Action) Environmental Effects

With the implementation of the No Action Alternative, the Lower Pratt River Trail from the Middle Fork Trail Bridge down to the confluence of the Middle Fork and Pratt Rivers would remain as they are. Currently, Forest users access the readily identifiable segments of the Pratt Trail and these users would still continue to access these segments as well as user built trails whether or not the trail is rebuilt or not. There have been no studies to determine the number of visitors that are currently using the existing Pratt Trail from the Middle Fork Bridge down to the confluence if the Pratt River and the Middle Fork Snoqualmie River.

This trail is typical of those constructed in the early 1900’s in that it was built in Riparian Reserves and in the valley bottom and followed the curves and bends of the Middle Fork Snoqualmie River. Thus, with this alternative the existing trail would remain as it is; no erosion

control, or rehabilitation measures would be employed to prevent potentially eroding soils from entering local stream systems.

Implementing the No Action Alternative would not meet the stated “need” for this project. Specifically, implementation would not provide for Public Safety. There would not be an adequate access route to the Pratt drainage from the Middle Fork road, the Middle Fork Campground, or the Middle Fork Trail, on the south side of the Middle Fork Snoqualmie River resulting in the possibility that public safety may be affected. Currently, the only alternative that Search and Rescue (SAR) personnel have is to hike from I-90. From I-90, SAR personnel would tie into Pratt Trail and then hike down the Pratt River to the Middle Fork Snoqualmie River or wade the Middle Fork from the Middle Fork Road or attempt to reach the Pratt by pushing through the brush from the Middle Fork Trail Bridge for over 3 miles. This situation is unacceptable when swift actions are needed that may save lives. (For further explanation, refer to the “need” statement in Chapter I of this document).

Further, the Alpine Lakes Area Land Management Plan (1981) calls for stewardship to “provide for the protection of the area and preservation of its wilderness character.” Alternative 1 does not do this because: Increasing public use has impacted the physical and social environment and has required increased management of wilderness resources and by not rebuilding the Lower Pratt River Trail, one opportunity for recreation activities would not be fully realized that could take the pressure off of overcrowded Wilderness areas.

Lastly, by not providing an adequate recreation opportunities in this area, the Forest would not be consistent with current land management direction and associated standards and guidelines as determined by the Alpine Lakes Wilderness EIS (1981); The Alpine Lakes Wilderness Recreation Use EA (1993); and the Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan (LRMP) as amended (1990). That is: *“Hiker and interpretive trails should be provided near most large campgrounds to provide for visitor use and enjoyment. Some of these should be suitable for barrier free access”* and *“The overall wilderness management goal will be to reduce or eliminate the adverse effects associated with human use, when use approaches or exceeds the established, “Limits of Acceptable Change” (LRMP page 4-39).*

Finally, the selection of Alternative 1 would mean that the Pratt River drainage would not have an adequate trail system readily accessible to forest users. If the Pratt drainage is included in the Alpine Lakes Wilderness, the Pratt Trail could be rebuilt in the future because it is an existing trail however, if a new trail is desired in a new location (e.g. to Rainy Lake) the opportunity to provide such a new trail would be foregone. This is because within the wilderness, additional new trails cannot be built based on the standards described with the ALAMP. (For further explanation, refer to the “need” statement in Chapter I of this document).

Through public comments, a concern has been voiced that there are not enough trails that are snow free during most of the winter. Under Alternative 1, the Lower Pratt River Trail would remain as is thus, the number of opportunities for utilizing an improved trail that is below 1500’ and is generally snow free would remain the same.

Alternative 2 (Proposed Action) Environmental Effects

If Alternative 2 is implemented, approximately 3.25 miles of the Lower Pratt River Trail would be reconstructed / relocated so that the trail is suitable for use by both hikers and pack animals. This reconstruction would occur between the Middle Fork Trail Bridge and the currently maintained portion of the Pratt River Trail (the trail that parallels the Pratt River).

A graduate student in preparation for writing a thesis (Jellum 2006) collected trail use data in calendar year 2006. In this study, this student found that from April to October 3, 3059 users accessed the Middle Fork Trail system from the Middle Fork Trailhead; 392 users accessed this system from the Dingford Creek Trailhead; and 206 users accessed this system from the Dutch Miller Gap Trailhead totaling 3657 users for the season¹⁸. Accompanying these users were 25 stock animals. These statistics indicate that less than one percent (<1%) of the users on this trail system utilized pack animals; or there is one animal for every 146 users. Thus, the odds of encountering pack animals on this trail at any one time are very low. With this alternative, the estimated usage would be the same on the Pratt Trail as with the rest of the Middle Fork trail system. One estimate of usage on the Lower Pratt River Trail, based on historic experience by long time employees, indicates that the possibility of using pack animals on the Pratt Trail system would be lower than indicated by the 2006 study. This is because for users with pack animals, they prefer a loop type of trail where the Pratt route would be an out-and-back trip. This is because the Pratt Trail, near Pratt Lake, is not passable by pack animals. Further, Forest Order 94-001 (described previously) does not allow camping within one-half mile of Pratt Lake as well as other lakes in the Alpine Lakes Wilderness, thus Pratt Lake is not a specific destination for pack animals.

The Middle Fork Trailhead is near the newly constructed Middle Fork Campground. Further, the CCC Trail passes the campground to the west and is accessible from the campground by a connector trail. Thus, campers do not have to drive to access the Middle Fork Trail, the CCC Trail or the Lower Pratt River Trail system.

Implementing Alternative 2 would meet the stated “need” for this project. Specifically, implementation would provide for Public Safety. This would provide for a direct access route to the Pratt drainage from the Middle Fork road, the Middle Fork Campground, or the Middle Fork Trail located on the south side of the Middle Fork Snoqualmie River. With this alternative, Search and Rescue (SAR) personnel would be able to access the Pratt drainage by either hiking from I-90 or via the bridge at the Middle Fork Trailhead. Thus, swift action would be possible if the need for search and rescue activities within the Pratt drainage arises.

Further, the Alpine Lakes Area Land Management Plan (1981) calls for stewardship to “provide for the protection of the area and preservation of its wilderness character.” Alternative 2 does this because, increasing public use has affected the physical and social environment and has required

¹⁸ *Based on other studies conducted in 1999, it is estimated that approximately 80% of users filled out the registration form provided at the trailheads.*

increased management of wilderness resources. By rebuilding the Lower Pratt River Trail, an alternative opportunity for recreation activities would be available that could take pressure off overcrowded Wilderness areas.

Lastly, by providing an adequate trail along the south side of the Middle Fork Snoqualmie River, the Forest would be consistent with current land management direction and associated standards and guidelines. These standards and guidelines are described in the Alpine Lakes Wilderness EIS (1981), The Alpine Lakes Wilderness Recreation Use EA (1993), and the Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan (LRMP) as amended (1990). That is, *“Hiker and interpretive trails should be provided near most large campgrounds to provide for visitor use and enjoyment. Some of these should be suitable for barrier free access”* and *“The overall wilderness management goal will be to reduce or eliminate the adverse effects associated with human use, when use approaches or exceeds the established, “Limits of Acceptable Change” (LRMP page 4-39).*

Over the past few years, several improvements have occurred in the Middle Fork drainage that has been instrumental in changing the uses of the Taylor and Middle Fork valley. That is, problem areas such as dispersed camping areas have been closed or restricted so that they are only accessible by walking. Restricting use has provided opportunities for vegetation re-grow on disturbed soils as well as deterring the dumping of garbage. Further, in some areas, vehicles were able to access the river and possibly drive onto the gravel bars. With blocking the dispersed sites, access for vehicles to the river has been eliminated. Recently the Middle Fork Campground was constructed and there has been a proposal to pave the Middle Fork Road from the end of the current paving near North Bend up to either the Middle Fork Trailhead or the Taylor River Bridge. It is anticipated that these improvements are going to attract more and more users into the area and in doing so, require more and more opportunities for recreation. With the rebuilding of the 3.25 miles of the Pratt Trail, an enhanced opportunity for a recreation activity in the Pratt drainage would be provided.

Currently the use level of the Lower Pratt River Trail is considered Low (L), which equates to 1 to 500 users per year. Comparatively, the use for the Middle Fork Trail is considered Heavy (H), which equates to 2,501 to 5,000 users per year. Lastly, the Pratt Lake Trail originating from I-90 is considered Extra Heavy (X), which equates to over 5,000 users per year. With the implementation of Alternative 2, it is anticipated that the use of the first four miles of the Lower Pratt River Trail would change from Low (L) to medium or heavy, 500-3,000 users per year. This is because there is a remnant stand of old growth in the Pratt River drainage, which would more than likely become a destination point and by anticipating use based on use tables 3, 4, 5, and 6 within this document (This EA, pages 43-45). Beyond this old growth, there are no other amenities that would attract users or that may become a destination point thus, the upper sections are anticipated to remain Low (L) or Medium (M) category.

One concern that was voiced in various public venues is the costs of maintenance. The following table lists the costs per mile for maintenance of trails as well as the costs for construction across the district:

Table 9: Costs of Maintenance per mile (Alternative 2)

	Hiker/Animal Non-Wilderness	Hiker/Animal Wilderness
Brushing	\$1,100	\$1,400
Clearing	\$200	\$300
Tread and Drainage Repairs	\$400	\$400
Totals	\$1,700.00	\$2,100.00

This table includes non-wilderness costs for the purposes of comparison. As can be seen in this table, the costs of maintaining a trail outside of the wilderness is cheaper than a trail in the wilderness. This is because a wilderness trail is much more labor intensive since power tools are not allowed (e.g. saws, powered carriers,

powered brushers, etc.). All costs are based on district experience and by considering inflation.

Through scoping and public comments, a concern has been voiced that reconstructing/relocating these 3.25 miles of the Pratt Trail would allow increased use of lakes and areas within the Alpine Lakes Wilderness (including Pratt, Thompson Lake, etc.). Trail use within the lower Pratt drainage is expected to increase however, the distance from the end of this segment of reconstructed trail to Pratt Lake (in the Wilderness) is approximately 8 miles. However, the distance from the I-90 trailheads to Pratt Lake is 2 miles. Thus, District experience indicates that if Pratt Lake or Thompson Lake were the destination, the majority of users would access this area from I-90 rather than through the Pratt drainage.

With Alternative 2, the reconstructed Lower Pratt Trail would add an adequately improved trail to the inventory of existing trails that are below 1,500 feet in elevation, are generally snow free, and can be used during the winter. This alternative would add approximately 4.5 miles of low elevation trail.

Alternative 3 (Hiker Only) Environmental Effects

As described in Alternative 2, Alternative 3 would reconstruct / relocate the Pratt Trail for approximately 3.25 miles however; this alternative would build the trail to standards suitable for use by hikers only. This reconstruction would occur between the Middle Fork Trail Bridge and the currently maintained portion of the Lower Pratt River Trail.

Implementing Alternative 3 would meet the stated “need” for this project. Specifically, implementation would provide for Public Safety. This would provide for a direct access route to the Pratt drainage from the Middle Fork road, the Middle Fork Campground, or the Middle Fork Trail located on the south side of the Middle Fork Snoqualmie River (This is the same as Alternative 2; refer to Alternative 2 for the complete text).

Alternative 3 would: “provide for the protection of the area and preservation of its wilderness character.” Alternative 3 does this because, increasing public use has affected the physical and social environment and has required increased management of wilderness resources. By

rebuilding the Lower Pratt River Trail, an alternative opportunity for recreation activities would be available that could take pressure off overcrowded Wilderness areas (This is the same as Alternative 2; refer to Alternative 2 for the complete text).

By providing an adequate trail along the south side of the Middle Fork Snoqualmie River, the Forest would be consistent with current land management direction and associated standards and guidelines. These standards and guidelines are described in the Alpine Lakes Wilderness EIS (1981), The Alpine Lakes Wilderness Recreation Use EA (1993), and the Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan (LRMP) as amended (1990) (This is the same as Alternative 2; refer to Alternative 2 for the complete text).

As has been described, with Alternative 3, the estimated effects would be the same as in Alternative 2 except for trail encounters and trail costs. This trail would be closed to all animals (including llamas, horses, goats, etc.) thus, there would be very little if any chance of meeting any animal on this trail unless users are doing so illegally. Further, the trail would not have to be built to the same “strength” standards as if an animal were to be allowed on the trail. Thus, costs for construction would be lower and maintenance would cost less (refer to the following table).

One concern that was voiced in various public venues is the costs of maintenance. The following table lists the costs per mile for maintenance of trails as well as the costs for construction across the district:

Table 10: Costs of Maintenance (Alternative 3)

	Hiker only Non-Wilderness	Hiker only Wilderness
Brushing	\$900	\$1,200
Clearing	\$200	\$250
Treadand Drainage Repairs	\$350	\$350
Totals	\$1450.00	\$1,800.00

This table includes non-wilderness costs for the purposes of comparison. As can be seen in this table, the costs of maintaining a trail outside of the wilderness is cheaper than a trail in the wilderness. This is because a wilderness trail is much more labor intensive since power tools are not allowed (e.g. saws, powered carriers,

powered brushers, etc.). Further, the costs are reduced in both cases because the trail tread does not have to be as strong for hiker only versus having to support the weight of an animal. All costs are based on past experience and by considering inflation.

With Alternative 3, the reconstructed Lower Pratt Trail would add an adequately improved trail to the inventory of existing trails that are below 1,500' in elevation, are generally snow free, and can be used during the winter. This alternative would add approximately 4.5 miles of low elevation trail.

In calendar year 2006, King County Search and Rescue (SAR) cleared a helispot in a level area on the east side of the Middle Fork Snoqualmie River and to the north of the Pratt River. This clearing was completed so that SAR could access the lower Pratt drainage in the event that search and rescue activities as well as the possibility of the extrication of victims could be accomplished. Indications are that adjustments were made in the proposed wilderness expansion boundary to exclude this helispot so that it could be used in the future. However, during heavy cloud cover or during heavy weather events, this helispot could be inaccessible to any type of aircraft or, the machine could be grounded if heavy weather moved in during operations. Thus, a helispot as well as a trail would accommodate all possible SAR activities in all types of weather.

Cumulative Effects

The following table shows the determination of potential cumulative effects for recreation. This table includes past, present, and reasonably foreseeable projects within the Pratt Trail vicinity that overlap with this trail reconstruction project in at least one variable of time or space. (See Appendix C for the list of all projects assessed, including those with no overlap.)

The following project in the vicinity of this proposed trail reconstruction has the potential to contribute cumulatively to the trail resources:

- On-going maintenance of the Middle Fork Trail #1003 and the segment of the Pratt Trail along the Pratt River #1035.

Table 11: Determination of Cumulative Effects - Recreation

Project	Potential Effects	Overlap in		Measurable Cumulative Effect?	Extent Detectible?
		Time	Space		
Middle Fork Access and Travel Management EA; road closures.	Recreation potential has been reduced in specific areas. Possible increased usage of remaining facilities.	No	Yes	Not Measurable	Closures have been completed but no background data is available. Patterns of use on this trail have not yet been established.
On going maintenance of trails 1003 and 1035.	Additional mileage included in maintenance budget where budgets are remaining static or could possibly be reduced.	Yes	Yes	Yes	Unless there is an increase in maintenance funds, there is the potential that maintenance schedules would have to be altered and possibly extended to accommodate the additional trail mileage.
The reconstruction of Road 56. The proposed action is to pave the road with 9-foot lanes and 2-foot shoulders.	Increased recreational use due to the ease of accessing the Middle Fork and Taylor River drainages.	Yes	Yes	Not Measurable	It is estimated that visitor use would increase but it is not known how many users would come to this trail specifically unless studies have been completed.
Huckleberry Land Exchange, 6,800 acres of private lands are now owned by the NF, it is possible the lands in the Pratt could be deemed wilderness.	Currently, lands now owned by the FS are available for developing recreation opportunities however, the expansion of the wilderness into the Pratt drainage would eliminate the potential for further development of recreation amenities (e.g. trails)	Yes	Yes	No	Through public comments, several citizens have expressed the desire to have additional trails built to other locations (e.g. Rainy Lake); this would not occur. The Pratt Trail exists and can be rebuilt and improved.
Portions of the CCC Trail have been built, trail could connect to the King County trail system	Increased recreational use for multiple day users who wish to hike from areas in King County to through the Pratt drainage.	No	Yes	Not Measurable	It is estimated that visitor use would increase but it is not known how many users would come to this trail specifically unless studies have been completed after the trail is completed.
Completion of the Middle Fork Campground	Increase in trail use requiring more maintenance	Yes	Yes	Not Measurable	Completion of the trail would provide an additional recreation opportunity for the users. It is not known how many would use it unless studies are completed.
Past Clear Cut Timber Harvests	Some clearing of small trees and brush would be needed to complete this project.	No	Yes	No	Though small trees and brush would be removed to make way for the trail, no harvesting is proposed.
Ongoing annual road maintenance on roads 56 and 5640.	Maintain existing use patterns that have developed over time.	Yes	Yes	No	No changes of use patterns are anticipated due to this activity.
A steel and wooden hiker bridge at Goldmyer has been completed.	Changes in hiker use patterns.	No	No	No	Effects to use patterns may change at Goldmyer but effects are specific to that area only with no overlap in time or space.
Create a safe and stable crossing over Burnt Boot Creek.	Changes in hiker use patterns.	No	No	No	Effects to use patterns may change near Goldmyer but effects are specific to that area only with no overlap.

On going maintenance of trails 1003 and 1035:

The 3.25 miles of trail that would be reconstructed/relocated under alternatives 2 and 3 is listed as a system trail in the Land Management Plan (Appendix E, page E-21). Thus, the mileage for this trail is included in the total of 1,383 miles of trail on the Forest (LMRP page 4-21). However, over the past several decades no maintenance dollars were expended on this segment of trail thus, this mileage would have to be included and scheduled for regular maintenance once the project is complete. The following table indicates the approximate amount of monies that would be spent for maintenance on this trail. (All numbers have been rounded).

Table 12: Trail Maintenance Costs

	Brushing	Clearing	Tread and Drainage Repairs	Total Cost for 3.25 miles, non- wilderness	Total Costs if in Wilderness
Alternative 1 No Action	\$0	\$0	\$0	\$0	\$0
Alternative 2, Hiker/Animal	\$1,100	\$200	\$400	\$5,525	\$6,900
Alternative 3 Hiker Only	\$900	\$200	\$350	\$4,710	\$5,900

As described above, the Lower Pratt River Trail miles are already included in the total trail miles on the Forest thus, of the total 1,383 miles of trail, the segment of Lower Pratt River Trail being discussed here represents approximately 0.23% of that total (<1 percent).

If Alternative 2 or 3 were implemented, then these miles of trail that would again be maintained would have to be included in a schedule of maintenance with all of the other active trails on the District. Thus, the effects could potentially be, that the scheduled maintenance of some lesser used trails would be extended to accommodate these additional miles (e.g. instead of regular maintenance on a particular trail being accomplished every two years, maintenance may have to occur every three years). Another possibility is that some item of maintenance (e.g. brushing) on a particular trail may have to be deferred until a later date.¹⁹ However, the Lower Pratt River

¹⁹ *Maintenance dollars used for trails come from many sources and the total amount allocated varies year-by-year. It is not possible to project with any great accuracy of what monies would be available for maintenance in the future. In some cases all trails scheduled for maintenance in a particular year would be completed however, in some years, monies are less and not all projects are completed. Thus, the trails scheduled for maintenance would have to be adjusted year-by-year pending the amount of revenue available for maintenance.*

Trail from the Middle Fork up to Pratt Lake is still being maintained and the only addition to the maintenance schedule for the district is 3.25 miles.

Though some of the annual trail maintenance funding for the Forest would have to be spent to again maintain the Lower Pratt River Trail, the mileage of the trail is so small (when compared to the total mileage), it would make little difference overall in the spending of the total budget.

Wildlife Affected Environment

Federally Threatened or Endangered Species

Impacts to wildlife and wildlife habitat would be slight, if not immeasurable, regardless of the alternative implemented.

Grizzly Bear

This project is located in Bear Management Unit (BMU) Unit #01 within the North Cascade Grizzly Bear Recovery Zone. To date, there have been no confirmed sightings of this species in this watershed.

As an interim management tool, the three National Forests north of Interstate 90 and the North Cascades National Park Complex developed a policy of “no net loss” of core habitat for the purpose of retaining future options for recovering the grizzly bear until superseded by a Forest/Park Plan amendment or revision. The focus of this policy is to maintain areas of relatively low human use.

Based on grizzly bear habitat use studies in Montana and British Columbia, core habitats are defined as those areas >1/3 mile from open roads, motorized, or high use trails. The baseline for the no-net-loss policy is open road and high use or motorized trails occurring in BMU's as of 7/31/97. Any reductions in core habitat due to new or reopened roads, motorized or high use trails, would need to be offset by increases to core habitats in another area of the same BMU. The new core area (created by closing roads, motorized or high use trails) would need to create an equal or greater area of core habitat and contain equal or greater value of seasonal foraging components compared to the area where core habitat was lost.

National Forest lands within the Middle Fork Snoqualmie River watershed fall almost entirely within the BMU #1 except those obtained from Weyerhaeuser in the Huckleberry Land Exchange which are not within this BMU. These lands also lie outside of the existing boundaries of the North Cascades Grizzly Bear Recovery Area. Using Geographic Information Systems (GIS) coverage for open road and high use or motorized trails, BMU's, early and late core areas, stand year of origin, and potential vegetation zones from the Mt. Baker-Snoqualmie National Forest, an analysis was conducted of BMU #1 to determine existing conditions.

Bear Management Unit #01 is approximately 99,180 acres in size, with 97,633 acres on National Forest lands. Based on conditions as of 1997, the BMU had approximately 64,598 acres of early core habitat and 58,308 acres of late core habitat. A large portion of the Lower Pratt River Trail

reconstruction/relocation, mainly along the Middle Fork Snoqualmie River, is within 1/3 mile of a high use road and is not considered grizzly core habitat. Due to the decision to implement the Middle Fork Snoqualmie River Watershed Access and Travel Management Plan (ATM) (2005), a net increase of core habitat occurred as the ATM decommissioned or closed roads in this BMU. The following lists the changes in core habitat resulting from implementation of the ATM:

Table 13: Change in Grizzly Habitat Acres

Habitats	Prior to ATM	Changes in Acres After ATM	Totals
Early Core Habitat	64, 598	+3,540	68,138
Late Core Habitat	58,308	+2,465	60,773

As can be seen from this table, there has been a net increase in grizzly bear core habitats resulting from the Middle Fork ATM road closures and road decommissioning.

Bald Eagle

Bald Eagles (*Haliaeetus leucocephalus*) have been sighted during the winter breeding season in this watershed (MBS 1998). However, there is a lack of anadromous fish in the Snoqualmie River basin above Snoqualmie Falls. According to the watershed analysis (1998) there are waterfowl in the watershed that could provide a sufficient prey base. However, the analysis did not provide information on how it determined that there was sufficient prey for eagles. Potential nesting structure occurs on approximately 4,898 acres while there are approximately 4,872 acres of potential roosting habitat. Due to the lack of anadromous fish, the presence of high recreation disturbance along the river and lakes, snow cover along high elevation lakes, and relatively few sightings of eagles in this area, this habitat are of little value to bald eagles for nesting. Some of the proposed activities, including ground disturbance are within 0.25 miles of potential eagle forage and roosting habitat.

Northern Spotted Owl

Habitat for the spotted owl (*Strix occidentalis caurina*) is present within this project area. Based on the watershed analysis (1998) eight known historic activity centers have been recorded in the watershed. The watershed consists of approximately 7,584 acres of nesting and roosting habitat; 11,148 acres of foraging habitat, and 14,816 acres of dispersal habitat. Further, Critical Habitat (CHU #WA-32) and Late Successional Reserve (LSR #122) overlap the project area.

Some of the proposed activities, including ground disturbance, are within 0.25 miles of suitable spotted owl habitat and critical habitat.

Marbled Murrelet

There are approximately 1,452 acres of suitable Marbled Murrelet (*Brachyramphus marmoratus marmoratus*) habitat located primarily in the upper reaches of the mainstem Middle Fork Snoqualmie River, Taylor River, Quartz Creek, and Pratt River. Additionally, there are approximately 3,722 acres of recruitment habitat scattered throughout mostly private land.

Critical Habitat (WA-10-c) overlaps portions of the project area. Based on the watershed analysis (1998), there are two known occupied sites within Section 10 T.23 N. R.11 E. and along Quartz Creek in Section 16 T.24 N. R.10 E. At its closest point, Section 10 is approximately 3 miles away and Section 16 is approximately $\frac{3}{4}$ miles away. Some of the proposed activities, including ground disturbance, are within 0.25 miles of suitable murrelet habitat and critical habitat.

Gray Wolf

There has been one Class 2 sightings of a gray wolf (*Canis lupus irremotus*) in the watershed. Suitable habitat is defined here as large areas of security habitat and available prey. Within the watershed, combined open road and trail density is above 1.0 miles/sq mi. The Watershed Analysis identified approximately 6,682 acres of potential suitable den and rendezvous habitat, mostly in wilderness. Deer and elk do occur in the watershed, and they do winter along the mainstem of the Middle Fork Snoqualmie, Pratt, and Taylor Rivers, although the herd size is considered small compared to other elk herds. Potential security habitat exists northwest of the Forest Road 56 and 5640 road junction. For this analysis, grizzly bear core habitat is also defined as gray wolf security habitat.

Canada Lynx

There are no known confirmed lynx (*Lynx Canadensis*) records within the project area and watershed. Although the watershed analysis identified potential suitable habitat for this species, more recent habitat mapping information and U.S. Fish and Wildlife Service mapping direction have identified only relatively small amounts of lynx habitat on the Mt. Baker-Snoqualmie National Forest. The project area for this analysis is approximately 14 miles from the nearest potential, lynx habitat mapped on the Forest using the Forest Service Regional Office habitat mapping criteria.

Sensitive, Management Indicator, and other Species of Concern

American Peregrine Falcon

There is no medium or high quality Peregrine Falcon (*Falco peregrinus anatum*) habitat within 0.25 miles of any of the proposed project sites. The closest known nest site is over five miles to the west of the analysis area on state lands. Status of the peregrine use in the Middle Fork Snoqualmie River Watershed is unknown.

Pileated Woodpecker

The proposed project is within Pileated Woodpecker (*Dryocopus pileatus*) and adjacent to habitat. There have been seven incidental sightings within the watershed.

Other Primary Cavity Nesters

Suitable habitat is present within the project area.

Townsend's Big-Eared Bat

There are suitable Townsend's big-eared bat (*Plecotus townsendii*) roosting trees/snags in the old-growth stands within the project area. There are no known sightings of this species within the project area.

Other Bats

Suitable habitat is present within the project area.

California Wolverine

Suitable California wolverine (*Gulo gulo luteus*) den habitat is not present or adjacent to the proposed project area; however, it may be within dispersal and/or foraging area.

Mountain Goat

No mountain goat (*Oreamnos americanus*) habitat is present within or adjacent to the project area. There is designated mountain goat area (winter range) near Garfield Mountain. A healthy population of goats exists in the watershed and suitable habitat is available and well connected across the landscape.

American marten

Suitable American Marten (*Marten americana*) den and foraging habitat for this species is generally found above the project area at elevations over 3,000 feet. This species is known to be present within the watershed.

Salamander and Slug Species

Potential suitable habitat is present within the project area; surveys did not detect the presence of any of the following species.

Puget Oregonian (*Cryptomastix devia*); Warty jumping slug (*Hemphillia glandulosa*); Kneeling jumping slug (*Hemphillia burringtoni*); Blue-grey tail-dropper (*Prophyaon coeruleum*); Evening field slug (*Deroceras hesperium*); Larch mountain salamander: (*Plethodon larselli*); and Van Dyke's salamander (*Plethodon vandykei*).

Black Tailed Deer and Elk

Both deer and elk are known to over-winter along the mainstem Middle Fork Snoqualmie River but mostly on private land (generally below the project area). Summering and fawning/calving occur in the Pratt, Taylor, and Quartz Creek drainages with some animals moving to the higher elevations in the wilderness. The herd sizes are small compared to herds south of I-90.

Birds

Some land bird (song bird) species, including neo-tropical migratory birds, use mixed conifer/deciduous forests-typical of the immediate Pratt Trail project area-for nesting and foraging.

Wildlife Environmental Effects

Consultation

Consultation with the United States Fish and Wildlife Service (USFWS) on the effects of the proposed Pratt Trail reconstruction/relocation project on threatened and endangered wildlife species occurred under the 5-year Programmatic Biological Assessment for Forest Management: Mt. Baker-Snoqualmie National Forest (2002). The USFWS issued a Biological Opinion (BO) on this consultation [for the programmatic] in September 2002. The USFWS issued incidental take of spotted owl and marbled murrelet due to harassment from above ambient noise-generating projects, consistent with this Biological Opinion.

The Level 1 Team (which consists of USFWS, the National Oceanic and Atmospheric Administration (NOAA), and Forest Service biologists) reviewed consistency of twelve projects submitted by the MBS (of which one was the Lower Pratt River Trail) with the programmatic assessment and Opinion. The USFWS signed-off on the Project Consistency Evaluation Form on January 2003, February 2003, and March 2003 thus meeting consultation requirements under the Endangered Species Act.

The effects determination for northern spotted owl and marbled murrelet is, *Likely to Adversely Affect* for noise disturbance. [Note: no additional consultation is required, as the Programmatic BO granted incidental take due to noise.]

The effects determination for owl and murrelet critical habitat is *No Effect*.

The effects determination for bald eagle is *No Effect*.

Environmental Effects Common to All Alternatives

Implementing any of the alternatives would have no impact on American Marten, Canada Lynx, Mountain Goat, common loon, peregrine falcon, great gray owl, Oregon spotted frog, Van Dyke's or Larch Mountain salamander, or other species including the mollusk *Cryptomastix devia*. This is because this area does not support habitat for these species, or the habitat is present near the project area but would not be affected, directly or indirectly, with the implementation of any of the alternatives.

Pileated Woodpecker and Other Primary Cavity Nesters

Potential habitat for these species would not be significantly removed or modified thus, there would be no impacts to these species. However, some local short-term disturbance could occur during ground disturbing activities.

Townsend's Big-Eared Bat

Potential habitat would not be significantly removed or modified in any significant manner for this species thus, there would be no impacts. There are no known sightings of this species within the project area. However, some local short-term disturbance could occur during ground disturbing activities.

California Wolverine

Potential habitat would not be significantly removed or modified thus, there would be no impacts to this species. This is because some disturbance may occur locally and on a short-term basis during ground disturbing activities, but would not likely create significant disturbance since most activities would occur at lower elevations.

Deer and Elk

Under alternatives 2 and 3, clearing for the trail would involve removing brush 4 feet on either side of the trail tread and could equal up to 3 acres of clearing of brush and small trees (total) stretching over 3.25 miles of trail. The various species of brush could provide forage habitat and possibly some hiding cover however, since a narrow clearing corridor is spread out over such a long distance, impacts would be slight and would not be measurable at the scale of an animal's home range.

Land Birds

Up to 3 acres of land bird habitat could be impacted by the action alternatives. Impacts occur along the length of the trail covering a corridor 8 feet wide by 3.25 miles long. However, since a narrow clearing corridor is spread out over such a long distance, impacts would be expected to be on a within-territory scale, resulting in changes to habitat suitability, and not removal of individual territories. However, impacts are so small that they would not be expected to impact population levels for any land bird species.

Late Successional Reserve

All of the Lower Pratt River Trail is within Late Successional Reserve (LSR) 122. This LSR is approximately 16,734 acres in size with approximately 36% of the forest zone is in Old Growth Forest. Dispersal of owls to LSR's 121 and 123 is facilitated by wilderness but I-90 is between 122 and 123.

The 3.25 miles of trail reconstruction/relocation passes through mainly mid-seral and early seral stands of timber with scattered remnants of old growth along the route (LSR Assessment page 48, 2001). Implementation of either action alternative would include approximately 3 acres of brush clearing and the removal of small trees.

Standards for trail construction can be found in Forest Service Handbook 2309.18 – *Trails Management Handbook*, Amendment No. 2309.18-91-2. This handbook does not provide tree limitations on which trees to remove along any trail. However, standard practice for trail reconstruction/construction is to avoid cutting large trees unless absolutely necessary. This is because the Forest Service uses the "Recreation Opportunity Spectrum" (ROS) in deciding trail attributes. As stated in FSH 2309: "*The configuration, quality, sequencing of environmental settings, and the landscape attractions are the basic attributes of a trail setting and user experience*" (FSH 2309.18,1, Item 1.3, page 1 of 11). Thus, the goal is to cut as few trees as possible. Further, it is more costly and time consuming to fall trees and possibly removing the stump than to go around them. Clearing limit standards can be found under FSH 2309.18, 2.31b –

Exhibit 01. Based on standard practices for trail design, reconstruction, construction, and maintenance, brush and small trees (saplings) would be cut and there is the rare possibility that individual mid-successional coniferous trees could be removed (up to 70 years of age). There would be no affect on late successional forest and implementation of any of the alternatives would be neutral to the functioning of this LSR.

Alternative 1(No Action) Environmental Effects

Grizzly Bear and Gray Wolf

If the no action alternative is selected, the 3.25 miles of the Pratt Trail would not be reconstructed/relocated thus there would be no expected effects on the grizzly bear or gray wolf from project activities. Since activities would not take place, there would be no change to the current situation with grizzly bear core habitat.

While the trail would not be reconstructed/relocated recreation use of the remaining trail and user built trails would continue at current levels or may increase over time however, use is expected to be at a lower level than if the trail was improved.

Spotted Owl, Marbled Murrelet, and Their Critical Habitats

Noise disturbance from construction activities would not occur if the No Action Alternative were implemented; therefore, there would be no effect to either the spotted owl or marbled murrelet or their habitats under this alternative.

Bald Eagle

There would be no impacts to the bald eagle under this alternative. Potential habitat would not be removed or modified as a result of this alternative. Further, adequate available prey for bald eagles is not likely to be in the area to sustain a reproductive population. Wintering eagles arrive on the Snoqualmie Ranger District towards the end of October and are generally considered to be transient as they move to areas that support anadromous fisheries. Although sightings of eagles have also occurred during the breeding season, there have been no documents nest sites on this district.

Alternative 2 or 3 Environmental Effects

Grizzly Bear and Gray Wolf

Grizzly Bear: Currently, the Pratt Trail can be considered low use however, if either Alternatives 2 or 3 were implemented, the portion of the Pratt Trail that would be reconstructed / relocated would more than likely become high use. Thus, this use would effectively eliminate the core grizzly bear habitat that is within 1/3 mile from the trail. Further, there could be some temporary disturbance to this species from noise and increased activity (site specific) such as trail maintenance and reconstruction activities.

Although there would be a loss of grizzly bear habitat with either Alternatives 2 or 3, the overall core habitat within BMU #01 would be above the 1997 baseline level (there would be no net loss of habitat). The following table lists the habitat changes to the BMU with this project:

Table 14: Changes to Grizzly Bear Habitat

	Baseline Conditions 1997	Middle Fork Snoqualmie ATM	Pratt Trail Project	Change in Core Acres	Total Core Acres Remaining
Early Core Habitat	64,598 acres	+3,460 acres	-1,036 acres	+2,424	67,022 acres
Late Core Habitat	58,303 acres	+2,385 acres	-1,010 acres	+1,375	59,678 acres

As can be seen in the previous table, the Middle Fork Access and Travel Management (ATM) EA added acreage to the BMU core habitat by closing roads and rehabilitating dispersed recreation sites etc. Conversely, the Pratt Trail reconstruction / relocation project would reduce core habitat however, the resultant acreages would remain higher than the 1997 totals (No Net Loss).

Through public scoping, one respondent suggested to consider all prospective trails collectively (cumulatively) rather than piecemeal in reference to grizzly bear management. With the proposal in this EA, there are no other trails being considered now or in the near future (5 years or less) (refer to alternative descriptions and cumulative effects analysis for a list of projects). All existing trails have been accounted for in the total acreage of the Bear Management Unit (BMU). If in the future another trail is proposed (as has been recommended by certain public respondents i.e. Rainy Lake), the grizzly bear core habitat would be adjusted based on 1997 numbers (as illustrated in the table above).

If the Pratt valley is designated as wilderness, this concern is a moot point in that the area around the Pratt trail system would be considered “trail-less” and no new trails would be built but existing trails can be rebuilt and maintained (refer to page 5 in this document).

Once the proposed reconstruction of 3.25 miles of trail has been completed, access to the approximate 6-7 miles of trail that parallels the Pratt River would be easier. Though access to the remainder of the Pratt system is easier, it is anticipated that the majority of use would be within the first four miles of the trail and mainly along the Middle Fork River Snoqualmie River. This is because, most users would be on day-hikes and a remnant stand of old growth within the Pratt River drainage would more-than-likely become a destination point. Beyond this segment of old growth, there may be a slight increase in trail use of the remaining system however there are no amenities (e.g., waterfalls, overlooks, etc.) that would draw users to specific sites. Thus, the current use of the remaining Pratt Trail (above the old growth stand) is considered low use and it is anticipated that after implementation of Alternatives 2 or 3, use would continue to remain low.

With the implementation of either Alternative 2 or 3, the first four miles of the trail would be considered high-use (refer to page 50 of this EA) which would effectively eliminate the core habitat <1/3 mile from the trail. Changes in user groups on these trails are expected to have no adverse impacts to the grizzly bear beyond those already described (WL Report, Analysis File). There are no impacts expected because there is a the large home range and abundance of suitable habitat in the larger landscape. This includes core/security habitat adjacent to the project areas and the temporary nature of potential disturbance (e.g. trail reconstruction / relocation). Further, there would be no adverse impacts expected due to the expected use of the trail and the high mobility of this species, and the fact that there have been no confirmed sightings of grizzly bear (therefore low probability in the near future) within the Middle Fork Snoqualmie River Watershed.

Through public comment, one private citizen stated that the Middle Fork valley has been industrialized for the past 80 years and that to date no grizzly bear have been seen. In reviewing district records, there are no confirmed sightings or records of a grizzly in this drainage or on this part of the Forest.

Gray Wolf

If either Alternatives 2 or 3 were implemented, no suitable habitat would be removed or modified as a result of project implementation. There may be some temporary disturbance to this species from noise and increased site specific human activity associated with trail maintenance and reconstruction / relocation. Maintenance of the grizzly bear habitat as described previously would also benefit the gray wolf.

With the implementation of either alternative, there would be no adverse effects expected to this species given the large home ranges and the abundance of suitable habitat in the larger landscape. This includes core/security habitat adjacent to the project areas, the temporary nature of potential disturbance (e.g. trail reconstruction / relocation), the expected use of the trail, the high mobility of this species, and the fact that there has been no confirmed sightings of the gray wolf (therefore low probability in the foreseeable future) within the Middle Fork Snoqualmie River Watershed.

Spotted Owl, Marbled Murrelet, and Their Critical Habitats

No suitable habitat for the northern spotted owl or marbled murrelet would be removed or modified as a result of implementing Alternatives 2 and 3. Though not likely, there could be some temporary disturbance to these species from noise and increased human activity (site specific) such as trail maintenance and reconstruction/relocation activities. As a result, the effects determination for northern spotted owl and marbled murrelet is *Likely to Adversely Affect* for noise disturbance. [Note: no additional consultation is required, as the Programmatic BO granted incidental take due to noise.] To alleviate any adverse affects from noise to the spotted owl or marbled murrelet, timing restrictions are prescribed for this trail project. Thus, there would be no blasting or use of impact drivers, jackhammers, rock drills, helicopters, heavy equipment, motorized tools, or chainsaws from March 1 through August 5. Changes in user groups on

existing trails are not expected to have adverse impacts to either the spotted owl or murrelet. The effects determination for spotted owl and murrelet critical habitat is *No Effect*.

Bald Eagle

There would be no adverse impacts to the bald eagle if alternative 2 or 3 is implemented. This is because potential habitat would not be removed or modified with as a result of this project.

Adequate available prey for bald eagles is not likely in the area to sustain reproductive populations. Changes in use on trails and roads from hikers and/or stock are not expected to have significant changes in disturbance to eagles beyond what already exists.

Cumulative Effects

The following table describes the determination of potential cumulative effects for wildlife. This table includes past, present, and reasonably foreseeable projects within the Pratt Trail vicinity. As shown, there are no actions that overlap with this trail project in both time or space. (See Appendix C for the list of all projects assessed). Thus, there are no cumulative effects.

Table 15: Determination of Wildlife Cumulative Effects

Project	Potential Effects	Overlap in		Measurable Cumulative Effect?	Extent Detectible?
		Time	Space		
Middle Fork Access and Travel Management EA; road closures.	All species	No	Yes	Not Measurable	It is not known if there are changes to use on system trails due to road closures. Patterns of use on these trails (over time) have not yet been established.
On going maintenance of trails 1003 and 1035.	Grizzly Bear–Noise Disturbance and human presence. Spotted Owl and Murrelet–Noise Disturbance. Gray Wolf–Noise Disturbance and human presence associated with trail maintenance.	No	Yes	No	Trail maintenance occurs one trail at a time; maintenance would not occur at the same time on two different trails. There would be no adverse effect to the grizzly or wolf from the project or from trail maintenance. There would be no use of concussive equipment from Mar. 1st to Aug 5th thus alleviating adverse effects from noise.
The reconstruction of Road 56 which includes widening and possibly paving.	Spotted Owl and Murrelet – Noise Disturbance.	No	Yes	No	Reconstruction of road 56 and trail reconstruction/relocation would occur at two different times with no overlap in time. Thus, there would be no cumulative effects.
Huckleberry Land Exchange, 6,800 acres are now owned by the NF, it is possible these could be deemed wilderness.	All Species	No	Yes	No	The land exchange and wilderness designation are administrative only. The land exchange has already occurred with no vegetation projects proposed. The wilderness proposal has not yet occurred but no project proposals are anticipated.
Portions of the CCC Trail have been built, trail could connect to the King County trail system	Grizzly Bear, Gray Wolf, Spotted Owl, Marbled Murrelet, and Bald Eagle – Potential effects to the species due to increased use.	No	Yes	No	It is not known if there are changes to use on system trails due to construction of the CCC trail. Patterns of use on these trails (over time) have not yet been established.
Completion of the Middle Fork Campground	Grizzly Bear, Gray Wolf, Spotted Owl, Marbled Murrelet, and Bald Eagle – Potential effects to the species due to increased use.	No	Yes	No	It is not known if there are changes to use on system trails due to the camp ground. Patterns of use on these trails (over time) have not yet been established.
Past Clear Cut Timber Harvests (The Pratt Trail is within LSR 122).	Spotted Owl and Marbled Murrelet.	No	Yes	No	The project would have no effect on Late Successional Forest. Implementation of the alternatives would be neutral to the functioning of the LSR.
Ongoing annual road maintenance on roads 56 and 5640.	Grizzly Bear, Gray Wolf, Spotted Owl, Marbled Murrelet, and Bald Eagle– Potential effects to the species due to increased use.	Yes	No	No	It is anticipated that there would be no adverse effects to any species due to changes in use or use patterns through disturbance.
A steel and wooden hiker bridge at Goldmyer has been completed.	All Species.	No	No	No	Effects to use patterns may change at Goldmyer but effects are specific to that area only with no overlap in time or space.
Create a safe and stable crossing over Burnt Boot Creek.	Changes in hiker use patterns.	No	No	No	Effects to use patterns may change near Goldmyer but effects are specific to that area only with no overlap.

Fisheries Affected Environment

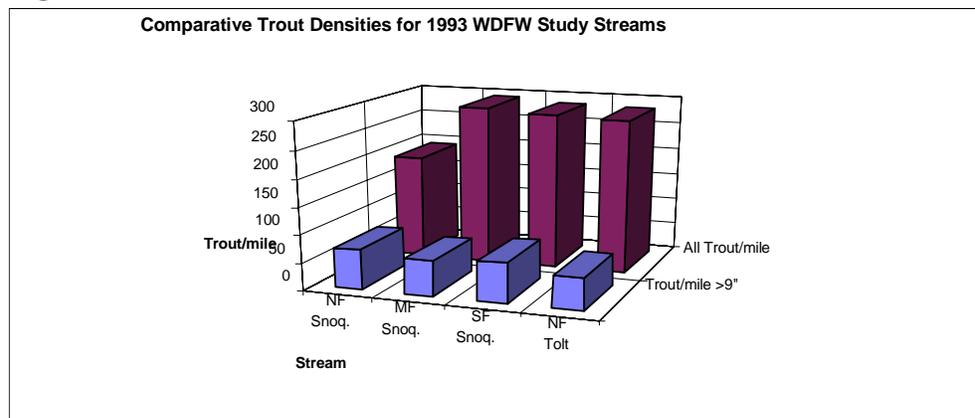
Aquatic Species²⁰

Past state and federal aquatic surveys near the project area have documented the presence of resident populations of rainbow trout (*Oncorhynchus mykiss*), cutthroat trout (*Oncorhynchus clarki*), eastern brook trout (*Salvelinus fontinalis*), mountain whitefish (*Prosopium williamsoni*), and various species of sculpin (*Cottus sp.*) (Pfeifer 1985) (USFS 1990, 1992, and 1997). The eastern brook trout population is introduced, but the rainbow and cutthroat populations may be native however, both rainbow and cutthroat trout were stocked near the project area as early as 1933 and as late as 1983. Brook trout stocking began in 1940, but ceased in 1963.

Hook-and-line surveys conducted in 1981 and 1984 showed cutthroat to be the dominant trout species within the Middle Fork Snoqualmie River (Pfeifer 1985). Trout growth in all the Snoqualmie forks appears to be below average. However, Pfeifer (personal communication 1996) did not recall that the fish from the Middle Fork were slower growing than the other populations. In Jackson and Jackson (1993), the Middle Fork was found to be slightly more productive (number of trout/mile) than the North Fork and Middle Fork Snoqualmie, and North Fork Tolt Rivers (Figure 5). However, this river receives the greatest fishing effort. As a result, it also has the lowest average density of trout greater than 9 inch in length per mile.

The following chart shows comparative trout densities (total number of trout per mile and number of trout per mile >9 inches in length) for 1993 Washington Department of Fish and Wildlife (WDFW) study-streams in the Snoqualmie River Watershed (Jackson and Jackson 1993).

Figure 5: Trout Densities



The entire Middle Fork Snoqualmie River watershed has been managed with “Catch and Release, Selective Fishery Regulations” since 1986, as part of the WDFW “Basic Stream Management

²⁰ The general description of Aquatic Species and Aquatic Habitat (Affected Environment) as described is from the Middle Fork Campground Environmental Assessment (2004).

Strategy” (Jackson and Jackson 1993). A hook-and-line study performed by Pfeifer (1990) was compared with studies performed in the South Fork to assess the effectiveness of the catch-and-release regulation. Frequency of length of the two populations was similar but the rate of catch and catch success did improve, particularly in the Middle Fork. However, in the 1990 survey, more large cutthroat trout (over 34 cm in length) were caught more than 1/4 mile from common river access points than were caught near the access points, indicating lack of angler compliance. It is suggested that poor compliance with the regulations is probably a major factor in the failure of the regulations to restore the historic abundance of older trout in these streams and compliance levels estimated by local WDFW agents in 1989 and 1990 ranged from 50% to 77% (Pfeifer 1990).

Whitefish and any sculpin populations within the analysis area are definitely native. No efforts have been made to identify specific sculpin species. Pfeifer (personal communication 1996) suggested that it would be worthwhile to sample the lower-valley wetlands and oxbows for possible native minnow species.

Aquatic Habitat

Aquatic habitat conditions near the project area are limited to R6 Level II surveys of the Middle Fork Snoqualmie River (1990 and 1997) and the Taylor River (1992). The Taylor River, near the project, is low gradient and dominated by gravel and cobble/gravel bed and gravel/sand bank substrates. Riparian vegetation condition is relatively good with mostly small and large tree seral classes present, though both soil compaction and erosion were observed in areas of dispersed recreational activity. This reach is dominated by riffle habitat (67%) with occasional lateral scour, eddy, and pocket pools (12%) scattered throughout. The lack of large pools in this reach is likely due to the low amount of large woody debris (LWD) present; 5 pieces/mile. It is expected that in-stream LWD loading would improve over the next century due to good quality recruitment potential of adjacent riparian vegetation.

The Middle Fork Snoqualmie River, near the project, is low gradient and is dominated by gravel and cobble/gravel bed and gravel/sand bank substrates. Riparian vegetation condition was relatively good with mostly small and large tree seral classes present, though both soil compaction and erosion were observed in areas of dispersed recreational activity. This reach has a pool-to-riffle ratio of 46:54 with lateral and mid-channel scour pools being the dominant pool type. Most of the pools are deep with a maximum average pool depth of 5.8 feet. Large woody debris (LWD) is located mostly in large jams at meander bends and entrances to side channels. The overall amount of in-stream wood found in this reach is low when compared to regional standards. In-stream loading is expected to improve over the next century due to good quality LWD recruitment potential of adjacent riparian vegetation.

Input Specific to the Project

This proposed project is located along the southeastern valley slope of the Middle Fork Snoqualmie River, between the Taylor and Pratt Rivers. The Middle Fork is a third order tributary within the Snohomish River Basin in Western Washington.

No anadromous salmonids, including Chinook salmon (*O. tshawytscha*), are present in the Middle Fork watershed due to the existence of Snoqualmie Falls, a complete natural migration barrier, downstream. No bull trout (*S. confluentus*) are known to be present in the Snoqualmie system above the falls.

One known fish-bearing stream (Rainy Creek) flows through the project area. Several other non-fish bearing, unnamed streams also cross the proposed trail route. Rainy Creek has a cascade/pool morphology and low to moderate gradient (2-10%), through the proposed alignment, as it flows through alluvial fan deposits. The dominant substrate types are large boulders and bedrock. Downstream of the proposed crossing site on Rainy Creek, brook trout and cutthroat trout have been observed. Tailed frogs (*Ascaphus truei*), typically an indicator of good water quality, were observed upstream of the proposed crossing site on Rainy Creek. There are other stream channel crossing along the proposed trail but these streams are intermittent and are non-fish-bearing. Though these stream channels may contain tailed frogs, none were observed.

Supplemental Information

When this project was first introduced, a report for fisheries as well as project consistency evaluation documentation was completed in late 2002 and early 2003 however, the project was not implemented and for a variety of reasons and has been postponed until now. Since 2003, the National Marine Fisheries Service (NMFS) formally designated Chinook critical habitat and listed steelhead as threatened, and the US Fish and Wildlife Service (USFWS) formally designated bull trout critical habitat.

303(d) Listed Waterways

An internet search of the Washington Department of Ecology website (<http://www.ecy.wa.gov/services/gis/maps/wria/303d/w7-303d.pdf>) resulted in retrieval of the listings for 303(d) Category 5 Assessed Waters for WRIA7 (2004 water quality list for Snohomish water resource inventory area). There are four points along the Snoqualmie River system that are on this list; the following table lists these sites:

Table 16 303(d) Listed Waterways

ID# and List #	Name	Parameter	Medium	Location
3033/7428	S.F Snoqualmie River	pH	Water	Approx. 5 miles above (east) of the confluence with the Middle Fork
2862/6571	Snoqualmie River	Temperature	Water	Approx. 1 mile below (west) of the confluence with the Middle Fork
2822/7415	Snoqualmie River	Temperature	Water	Approx. 2 miles below (west) of the confluence with the Middle Fork
2002/6570	Snoqualmie River	Temperature	Water	Over 22 miles below (west) of the confluence with the Middle Fork

As shown in the previous table, neither the Middle Fork Snoqualmie or Taylor Rivers nor its tributaries are listed as a 303(d) waterway.

Alternative 1 (No Action) Environmental Effects

There would be no effects to fish species as a result of reconstruction/relocation of the Lower Pratt River Trail. However, the existing trail as well as existing and future user built trails would still be utilized. There would be no rehabilitation of any bare soils and there would be no revegetation activities under this alternative.

Alternative 2 or 3 Environmental Effects

The following table describes the effects to aquatic species as contained in the Fisheries report(s) for this project (reports are in the project analysis file):

Table 17: Effects to Fish Species

Species		Parameter		Effects
Puget Sound Chinook Salmon		Spawning, rearing, migration, foraging		No Effect
Chinook, Coho, Pink Salmon		Essential habitat		No Effect
Bull Trout		Spawning, rearing, migration, foraging		No Effect
Species	Occurrence	Effects	Note	
Salish Sucker	Documented Absence	No Impact	Species not present in the Snohomish River Basin	
Puget Sound/Strait of Georgia Coho Salmon	Documented Absence	No Impact	No salmon are present above Snoqualmie Falls	
Native Puget Sound Lake and Riverine Sockeye Salmon	Documented Absence	No Impact	No salmon are present above Snoqualmie Falls	
Sea-run Puget Sound Coastal Cutthroat Trout	Documented Absence	No Impact	This species is not present above Snoqualmie Falls	

The National Marine Fisheries Service (NMFS) listed the Puget Sound Distinct Population Segment of steelhead as “threatened” on May 11, 2007 (72 FR 26722). Only the anadromous form (steelhead) is listed. This species utilizes the mainstem Snoqualmie River over 20 miles downstream from the proposed project, below Snoqualmie Falls, which is a natural barrier to anadromous fish thus, this species is outside the “action area” for this project. The effect

determination for the Puget Sound steelhead is *No Effect* because the proposed project is too far away to affect spawning, rearing, migration, or foraging for this species.

The Mt. Baker-Snoqualmie National Forest (MBS) has habitat for four fish species included on the Region 6, Regional Forester's Sensitive List (USDA FS 2004). These species are the Puget Sound/Strait of Georgia Coho Salmon, Puget Sound Coastal Cutthroat Trout, Baker River (Skagit) sockeye salmon, and Salish Sucker. MBS management indicator species (USDA FS 1990, page 4-46) include native anadromous and resident salmon, trout, and char. For the Lower Pratt River Trail project, only resident cutthroat and rainbow are known to use the area; cutthroat and rainbow are both in the mainstem Middle Fork Snoqualmie River, with cutthroat also in the Pratt River (MBS Aquatics GIS Project). Brook trout have been observed in Rainy Creek and is considered exotic that is neither a sensitive nor a management indicator species.

Sediments

Due to the bridge and/or trail ford construction under these alternatives, fine sediments could be displaced and be introduced into the streams and could be transported to the mainstem Middle Fork Snoqualmie River. The duration of these inputs would only occur during construction/reconstruction and within the first water year after completion. With the use of best management practices (BMP) and conservation measures, sediments are not expected to be measurable and the effects on resident fish species and their habitats would be negligible. In the absence of blasting, the impact determination for all sensitive and other fish species with management emphasis is *No Impact*.

Blasting

If blasting is necessary to pass through or level rock outcroppings, the resultant pressure waves have the potential to injure fish rearing in the Middle Fork Snoqualmie River or Rainy Creek (e.g., through expansion and contraction of internal organs). Vibrations in and adjacent to water have been documented to cause injury and death to rearing and adult fish from rupture of the swim-bladder and other organs, and to eggs and pre-emergent fry both directly and from collapse of redds. Blasting should not be done during spring when resident cutthroat and rainbow trout spawn and eggs are in the gravels, but because they could be rearing year-round, blasting adjacent to fish-rearing waters could injure any fish present. At this stage of the project, exact blasting locations have typically not been determined and will not be determined until implementation, where the need will vary based on site-specific conditions. Due to these unknowns, and blasting is needed, the likelihood is high that resident fish within a certain distance from the blast may be injured or killed. Contained in Appendix D of this document is the most recent MBS blasting guidelines for the protection of fish. If blasting is required and the setback distances as listed in included chart(s) are adhered to, the effect to resident cutthroat and rainbow trout is: *May Impact Individuals, Not likely to Trend toward Listing*.

Critical Habitat

Chinook: National Marine Fisheries Service (NMFS) designated critical habitat for Puget Sound Chinook on September 2, 2005 (70 FR 52630). The Lower Pratt River Trail project is over 20

miles upstream of the nearest designated Chinook critical habitat, and the effects determination for the proposed project is: *No Effect*.

Steelhead: National Marine Fisheries Service (NMFS) did not designate critical habitat for Puget Sound steelhead when it was formally listed in May 2007.

Bull Trout: The US Fish and Wildlife Service issued a final rule designating critical habitat for Coastal-Puget Sound bull trout on September 26, 2005 (70 FR 56212). National Forest System lands covered under the Northwest Forest Plan (including all lands within the Mt. Baker-Snoqualmie National Forest) were excluded from final listing designation. The Lower Pratt River Trail project is over 20 miles upstream of the nearest designated bull trout critical habitat, and the effect determination for the proposed project is *No Effect*.

(Conservation measures that address minimizing effects to fisheries including blasting are listed in the appendices in this document).

Stream Crossings

Effects from bridge and ford construction (at Rainy Creek and/or unnamed tributaries) are commensurate with the size of these crossings. Construction in the short-term could displace fine sediments into habitat utilized by native trout and possibly trail-frogs downstream of the proposed trail location. However, if Best Management Practices and Memorandum of Understanding guidelines were used while working in the stream channels, it would be expected that potential direct and indirect effects would be eliminated. Effects from the construction of crossings to habitat would be site specific to those streams being affected thus there would be no overlap in time or space with other projects in or around the Lower Pratt River Trail project.

Fisheries Cumulative Effects

The following table describes the determination of potential cumulative effects for fisheries. This table includes past, present, and reasonably foreseeable projects within the Pratt Trail vicinity. As can be seen, there are no actions that overlap with this trail reconstruction project in both variables of time or space. (See Appendix C for the list of all projects assessed).

Table 18: Determination of Cumulative Effects-Fisheries

Project	Potential Effects	Overlap in		Measurable Cumulative Effect?	Extent Detectable?
		Time	Space		
Middle Fork Access and Travel Management EA; road closures.	Introduction of Sediments	No	Yes	No	Projects completed. Long-term improvement work for sediment reduction.
Reconstruction of the Middle Fork Road	Introduction of Sediments	No	Yes	No	The estimated completion of reconstruction is in C.Y. 2012 – 2015 while the trail completion is estimated to be completed in C.Y. 2008 – 2011.
Huckleberry Land Exchange	Introduction of Sediments	No	Yes	No	The land exchange has been completed but was administrative with no proposed earth disturbing activities.
Portions of the CCC Trail have been built, trail could connect to the King County trail system	Degradation of riparian areas through public use, the construction of wading pools in the rivers, and disturbance of sediments in the river	Yes	No	Not Measurable	The CCC trail does not access the Middle Fork Snoqualmie River or any other trails along the route. The only affected resource may be Riparian Reserves along the CCC trail but they are too far away from the project area.
Completion of the Middle Fork Campground	Degradation of riparian areas through public use, the construction of wading pools in the rivers, and disturbance of sediments in the river	No	No	No	A trail accesses the Taylor River thus, affects could occur to the Riparian Reserve, pools could be constructed, and sediment could be disturbed. Any effects would be local and are too far apart to be combined.
Ongoing annual road maintenance on roads 56 and 5640.	Introduction of Sediments	Yes	No	Not Measurable	Even if small amounts of sediment enter the river systems from maintenance and the Pratt Trail, any small amount of sediment would be masked by

Project	Potential Effects	Overlap in		Measurable Cumulative Effect?	Extent Detectible?
		Time	Space		
					background sediment.
A steel and wooden hiker bridge at Goldmyer has been completed.	Introduction of Sediments	No	Yes	Not Measurable	Project has been completed. Any potential sediment from the bridge would be small and would not be measurable due to distance from the project site.
Create a safe and stable crossing over Burnt Boot Creek.	Introduction of Sediments	No	Yes	Not Measurable	Any potential sediment from the bridge would be small and would not be measurable due to distance from the project site.
On going maintenance of trails 1003 and 1035.	Introduction of Sediments	Yes	No	No	Any potential sediment would be small but would not combine with any potential sediment from the Pratt Trail due to distance from the project site.

As discussed previously, effects from the construction of stream crossings along the Lower Pratt River Trail, to surrounding habitat would be site specific to those streams being affected thus there would be no overlap in time or space with other projects in or around the Lower Pratt River Trail project. Since there is no overlap, there would be no cumulative effects.

Riparian Reserves Affected Environment

Currently, almost all of the original Lower Pratt River Trail is within Riparian Reserves for the Middle Fork, Rainy Creek, or other unnamed tributaries. With this reconstruction/relocation proposal, within the first 1.40 miles of trail, approximately 0.80 miles of trail would be within the Riparian Reserves of the Middle Fork, Rainy Creek, or an unnamed tributary. Beyond this point, the next 1.55 miles of trail are not within Riparian Reserves while the remaining 0.30 miles of trail are again in Riparian Reserve of the Middle Fork²¹. Preliminary reconnaissance and field reviews of the project area by project specialists indicate that no wetlands would be adversely affected by the reconstruction/relocation of this trail (refer to effects to wetlands and floodplains in this document).

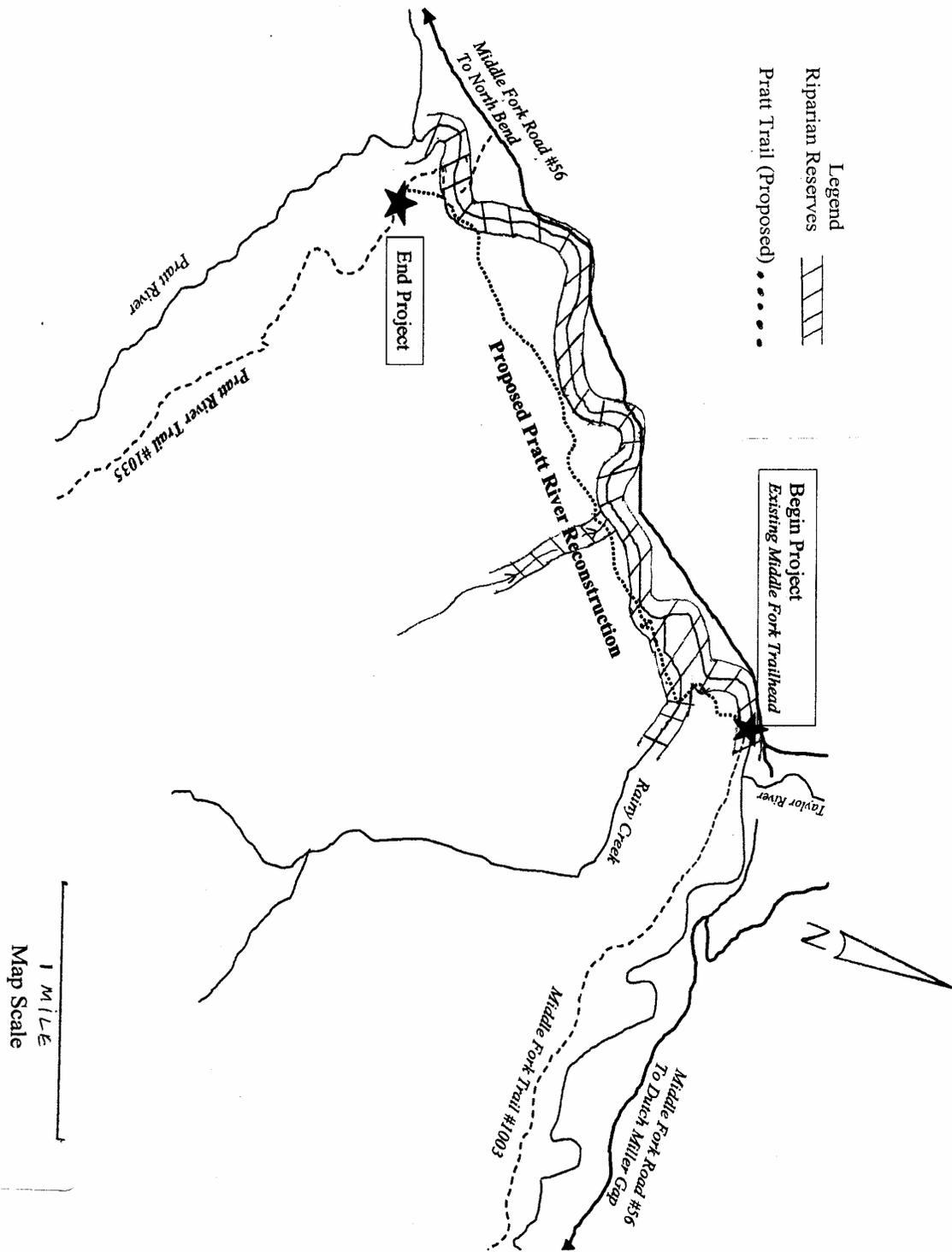
²¹ All new construction from Rainy Creek down to existing railroad and truck roads is outside of riparian reserves. Total miles of trail in Riparian Reserve = 1.1 miles. Total miles outside Riparian Reserve = 2.15 miles.

Though maintenance has not been performed on this segment of the Lower Pratt River Trail for several years, forest visitors are still utilizing this trail and in many places, users have created “user-built” trails. These user-built trails bypass difficult trail sections, cross Rainy Creek at various points and access the banks of the Middle Fork Snoqualmie River. The majority of these trails are within Riparian Reserves. Overall, the condition of the riparian vegetation in the area is good with some compaction and erosion evident due to dispersed recreation in the area (Fisheries Report).

Alternative 1(No Action) Effects

As previously described, the original trail is located within Riparian Reserves. With the implementation of the “no action” alternative, the existing trail would remain in place. Any effects that currently exist would continue (e.g. potential erosion, vegetation disturbance, etc.) Figure 6 indicates the riparian reserves that may be affected by this project and their relation to the reconstruction and relocation of the Lower Pratt River Trail.

Figure 6: Riparian Reserve Location Map



Alternative 2 or 3 Effects

As described in the alternative descriptions in Chapter 2, approximately 1.50 miles of the Lower Pratt River Trail would be within Riparian Reserves while 1.75 miles of the trail would be outside of Riparian Reserves. For those areas within Riparian Reserves, none of the trail would be located within the floodplain of any of the perennial or intermittent streams (except that short segment of trail that is used as an approach to the creek) rather, the trail would be located on the hillside above the streams/ivers. Once rebuilt, the trail within Riparian Reserves would affect approximately 1.45 acres of vegetation spread across a 1.50-mile area that is 8 feet wide. The actual trail tread where bare soil would exist is approximately 0.36 acres spread across a 1.50-mile area, 2 feet wide.

To lessen the potential for erosion along the trail route, all user built trails would be eliminated and “storm-proofed.” Further, if bare soils are to be seeded and mulched, the contractor is to use native seed or a desirable non-native species as designated by a district botanist. Additionally, to minimize the potential for erosion and the transport of soils to a stream channel, design techniques may include the installation of puncheon, turnpike, drainage structures, outsloping of the trail tread, and installing gravel on the trail tread. The decision of what structures are appropriate for each situation would be made on a site-specific basis. Trail grades may be out-sloped as much as the side slope allows typically, up to a 3% slope. Flat sections of trail may be “crowned” using imported materials and possibly gravel. Lastly, sensitive soils were not identified within the trail route (refer to soils within this EA).

Trail placement, trail design, the implementation of erosion control measures, and the avoidance of sensitive soils all ensure that the potential for erosion and soil displacement within the Riparian Reserves is minimized or not measurable. Further, any vegetation clearing would extend to a maximum of 4 feet on either side of the trail center over the length of the trail (Refer to alternative descriptions) thus, effects due to vegetation clearing would not be measurable since there would be no adverse affects to species that utilize the Riparian Reserves (refer to wildlife and fisheries analysis).

Riparian Reserves Cumulative Effects

There would be no cumulative effects to Riparian Reserves because: No other projects that would affect Riparian Reserves on either side of the Middle Fork Snoqualmie River or Rainy Creek or any other perennial or intermittent stream are proposed now or in the future (especially along the east side of the Middle Fork River). The only exception may be ongoing closures of dispersed recreation sites that have been closed on the west side of the Middle Fork River (refer to the Middle Fork ATM, EA). These closures are helping in the restoration and rehabilitation of Riparian Reserves, which is a benefit to Riparian Reserve along the Middle Fork as a whole.

Table 19: Determination of Cumulative Effects-Riparian Reserves

Project	Potential Effects	Overlap in		Measurable Cumulative Effect?	Extent Detectible?
		Time	Space		
Middle Fork Access and Travel Management EA; road closures.	Introduction of Sediments	No	Yes	No	Projects completed. Long-term improvement work for sediment reduction.
Reconstruction of the Middle Fork Road	Introduction of Sediments	No	Yes	No	The estimated completion of reconstruction is in C.Y. 2012 – 2015 while the trail completion is estimated to be completed in C.Y. 2008 – 2011.
Huckleberry Land Exchange	Introduction of Sediments	No	Yes	No	The land exchange has been completed but was administrative with no proposed earth disturbing activities.
Portions of the CCC Trail have been built, trail could connect to the King County trail system	Degradation of riparian areas through public use, the construction of wading pools in the rivers, and disturbance of sediments in the river	No	No	No	The CCC trail does not access the Middle Fork Snoqualmie River or any other trails along the route. The only affected resource may be Riparian Reserves along the CCC trail but they are too far away from the project area.
Completion of the Middle Fork Campground	Degradation of riparian areas through public use, the construction of wading pools in the rivers, and disturbance of sediments in the river	No	No	No	A trail accesses the Taylor River thus, affects could occur to the Riparian Reserve, pools could be constructed, and sediment could be disturbed. Any effects would be local and are too far apart to be combined.
Ongoing annual road maintenance on roads 56 and 5640.	Introduction of Sediments	Yes	No	Not Measurable	Even if small amounts of sediment enter the river systems from maintenance and the Pratt Trail, any small amount of sediment would be masked by background sediment.
A steel and wooden hiker bridge at Goldmyer has been completed.	Introduction of Sediments	No	No	No	Project has been completed. Any potential sediment from the bridge would be small and would not be measurable due to distance from the project site.
Create a safe and stable crossing over Burnt Boot Creek.	Introduction of Sediments	No	No	No	Any potential sediment from the bridge would be small and would not be measurable due to distance from the project site.
On going maintenance of trails 1003 and 1035.	Introduction of Sediments	Yes	No	No	Any potential sediment would be small but would not combine with any potential sediment from the Pratt Trail due to distance from the project site.

Botany Affected Environment

Within the first 1.40 miles of trail, approximately 0.80 miles of trail would be within the Riparian Reserves of the Middle Fork, Rainy Creek, or an unnamed tributary. The next 1.55 miles of trail would not be in riparian with the remaining 0.30 miles being within Riparian Reserves of either the Middle Fork and/or the Pratt River. The majority of trail is within second growth timber stands with a year of origin being the 1920s/1930s or when Weyerhaeuser reentered the drainage in approximately 1985. In specific locations, there are remnant old growth trees and stands south of the project. For the first two miles of the trail, the forest is mixed conifer and hardwoods, typically Douglas fir, western hemlock, red alder, and western red cedar. The remainder of the trail (especially) along old logging roads and trails the predominant species is red alder. The understory vegetation along this route is dominated by sword fern, vine maple, and many other plant species, depending on the site.

All surveys were completed in 2003 prior to modifications of the 2001 ROD that were in effect as of March 2004.

Noxious weeds are typically found in disturbed areas such as roadsides, parking areas, and gravel pits. Once these species are established in disturbed sites, they can spread into surrounding areas and out-compete native, early seral species.

Through the 30-day comment period, one respondent pointed out that non-native blackberry plants do exist along portions of the Lower Pratt River Trail. There are no plans at this time to eradicate this species.

Results of surveys

Endangered, Threatened, and Sensitive Plants

There are no known or suspected Federally Endangered or Threatened plant species on the Mt. Baker-Snoqualmie National Forest. There are 44 sensitive plant species (USDA Forest Service 1999) known or suspected on the Forest. District biologists conducted intuitive-controlled surveys for endangered, threatened, and sensitive plants as well as other species in June of 2002. The district biologists found no new sites of endangered, threatened, or sensitive plant species.

Vascular Plants, Fungi, Lichens, and Bryophytes

Known sites of *Platanthera orbiculata* (round leaf orchid), *Hypogymnia duplicata* (lichen), and *Pseudocyphellaria rainierensis* (lichen) do occur within 10 miles of the analysis area. During surveys, three new sites of *Platanthera orbiculata* and two new sites of *Diplophyllum albicans* (bryophytes) were found along the trail route. The *Platanthera* is scattered in the duff along the trail while the *Diplophyllum* occurred on large rocks and boulders along the trail route.

Noxious Weeds

The plants *Geranium robertianum* (herb Robert) and *Cirsium vulgare* (bull thistle) are known to occur in the vicinity of the project with *Geranium robertianum* being particularly abundant along the Middle Fork Road (Forest Road 56). No noxious weeds were found or occur in the project area.

Alternative 1(No Action) Environmental Effects

Alternative 1 would have no effect on Federally Endangered or Threatened plant species or on Vascular Plants, Fungi, Lichens, and Bryophytes. This is because either none of these species are present or no earth disturbing activities would occur that would affect the species. However, as discussed previously, Forest users are still utilizing parts of the original trail as well as creating “user-built” trails along the route. Under the no action alternative, this activity would not cease and there is the possibility that users may create a trail that would inadvertently affect if not destroy plants along the route(s).

Alternatives 2 or 3 Environmental Effects

Implementing either Alternative 2 or 3 would have no effect on Federally Endangered or Threatened plant species because none of these species are present within the project area. However, the alternatives have a slight possibility of affecting *Platanthera* and/or *Diplophyllum* due to construction activities. The possible disturbance of these plants can be mitigated by having a botanist mark known locations of these species prior to beginning construction activities and then avoid these sites as construction progresses.

Further, there is the possibility that trail users may purposely or inadvertently impact populations of *Platanthera* close to the trail by trampling, picking, or by collecting the whole plant. However, this possible impact can occur whether or not the trail is reconstructed, since users still use the Lower Pratt River Trail as well as the user built trails.

There would be a slight possibility that noxious weeds could become established along the proposed trail reconstruction/relocation site by either transporting seeds via trail equipment or by trail users. However, the possibility of spreading noxious weeds via construction equipment is very small since the contractor must ensure that all machinery and equipment (including hand tools and trailers used for hauling) are free of soil and vegetative material before entering the project area. Further, for erosion control measures, all seed mixes are to be locally collected native species or those desirable non-natives recommended for use on the Forest.

The Mount Baker Snoqualmie NF has been implementing the Prevention Strategies and Best Management Practices (BMP) (USDA FS 1990, Plan Amendment #14) since the strategy and BMP's were included in the Forest Plan standards and guidelines in 1999. The prescribed measures have been found to be effective and have become standard practice on this Forest.

Implementation of either Alternatives 2 or 3 would not be expected to contribute to weed spread. This is because implementation would include the prescribed “Botany Mitigation Measures,

Management Practices, and Requirements” (see Chapter 2), establish competitive desirable plants along the roadside would help prevent establishment of new weed infestations (Sheley and Petroff 1999; Losensky 1989), weed free mulch and fill materials would be used, and construction equipment would be weed-free prior to entering Federal lands.

Botany Cumulative Effects

Since no Federally Endangered or Threatened botanical species were found in the project area during plant surveys, there would be no direct, indirect, or cumulative effects from implementing any of the alternatives.

During surveys, 3 new sites of *Platanthera orbiculata* and 2 new sites of *Diplophyllum albicans* were found along the trail route. With implementation, there would be no direct, indirect, or cumulative effects to these two species due to the mitigation measure of avoidance during trail reconstruction/relocation. Avoidance would ensure that these species would not be disturbed.

There are no noxious weeds within the project area however, there are two known species in several locations (*Geranium robertianum* and *Cirsium vulgare*) located along the Middle Fork Road. The weeds in these known sites are expected to increase and disperse over time with future projects or by forest users because there are no proposals to eradicate these plants. Further, it is known that vehicles are a major cause of weed dispersal along roads (Lonsdale and Lane 1994).

Heritage Resources Affected Environment

Prehistory/Ethnography

The project area was the province of the ancestors of the present-day Snoqualmie Indian group. Variously called Snoquel-ol-mi, Snoqualmie, etc., they consisted of those people who made their permanent homes along the Snoqualmie River and its tributaries. Most villages were located downstream of Snoqualmie Falls, which formed a natural barrier for migratory fish; however, one village site is said to have been between the South and Middle Forks Snoqualmie River, and another was one mile below North Bend.

The village site at North Bend had a number of “removable houses,” which may indicate that it was a temporary or summer village. Temporary dwellings may have been constructed of a conical frame with cattail mats for siding. These may have been placed alongside permanent cedar plank houses as village populations grew during certain seasons or purposes.

The upriver and mountainous environment of the Snoqualmie Indians provided deer, elk, mountain goat, bear, beaver, grouse, huckleberries, blackberries, elderberries, and salmonberries, to name just a few of the food resources. Travel routes and trade networks were well established between the Yakima and Snoqualmie and between the Wenatchee and Snoqualmie. The Snoqualmie Pass Trail followed the general route of the South Fork Snoqualmie River. It was considered the “foot-trail” across the Cascades; and after the introduction of horses in the mid-1800s, it was used less often than the horse trail across Yakima Pass.

Euro-American Contact

Subsequent to the Donation land Act of 1850, European settlement of the western territories quickly took place. Under the Act, as amended to include Washington Territory in 1853, every white male who resided upon and cultivated land for four consecutive years was entitled to a quarter section if single and a half of a section (320 acres) if married. By 1855, 1,018 land claims had been taken in Washington, scattered widely over the territory.

Governor Isaac L. Stevens was directed by the President of the United States to treat with all of the Indians of Western Washington. Stevens was to unite the Indians into tribes for the purpose of negotiating a treaty and to make provisions to remove them to reservations located away from the centers of white populations, and for the most part, away from traditional lands and resources of the Cascade province.

Transportation, mining, logging, recreation, and Forest Service administration were the primary historic themes surrounding the project area. The proximity to the coast affected the development of transportation routes that connected resources with effective import, export, and distribution markets.

Historic Properties

Within one mile of the proposed project, 12 properties are listed in the Forest Heritage Resource database. All are associated with the historic period of use. Most sites represent historic transportation developments, with mining, logging, CCC, and administrative themes also represented. The majority of sites have been located through the historic records. It is likely that more sites will be discovered as heritage resource inventories are conducted in the watershed.

Roads

Early access up the Middle Fork of the Snoqualmie River was served by the construction of railroads and truck roads for mining interests around the turn of the century and logging access, which began in the 1920s.

Most of the roads on National Forest lands were constructed initially for timber harvest activities, with roads along the valley floor being constructed as early as the 1930s and 1940s. By the 1970s, the roads were being constructed in the steeper terrain of the watershed. In the majority of cases, a large portion of the road system has served multiple forest management access objectives. Included in these objectives are fire access as well as public access for dispersed camping, hunting, fishing, wildlife, and scenic viewing, berry picking, and trailhead access to both wilderness and non-wilderness areas.

Railroads

Over 36 miles of logging railroad were completed and used in the Middle Fork area. These lines came from Edgewick to the Taylor River with main spurs reaching up the Pratt River Valley and another going as far as Goldmyer Hot Springs. This line was owned and operated and maintained by the North Bend Timber Company with the right-of-way grants from both the Pacific States Lumber Company and the Snoqualmie Falls Lumber Company.

By the early 1920s, logging operations in the Middle Fork Snoqualmie River area commenced and over time, the area supported up to five sawmills, which were the main contributors to the economy of the surrounding environment. The last mill in the North Bend area closed in the late 1980s, making the Weyerhaeuser Mill, in the town of Snoqualmie, the last vestige of a dominant industry. The Weyerhaeuser Mill closed in the winter of 2001/2002.

Mining

Considerable development occurred in 1896 at the Dutch Miller and Bahoster property located at the extreme head of the Middle Fork Snoqualmie River (Dubois 1906). By 1901, these mines had produced several shipments for the smelter principally in copper. In 1941, a mine-to-market road was proposed in the area but the proposed road was never completed. The materials most frequently mined today in this area are quartz crystals.

Forest Service

The Pacific Forest Reserve was set-aside in 1893, and then closed to settlement and resource use. In 1897, the Mt. Rainier Forest Reserve was designated with a new mandate; mining, agriculture, and timber uses were allowed on suitable lands within the reserve. In 1899, the Mt. Rainier National Park was established from part of the Mt. Rainier Forest Reserve and in 1904, an additional portion of the Reserve was transferred to the Park. The Forest Reserve was transferred from the Department of the Interior to the Department of Agriculture in 1905 and subsequently designated the Washington National Forest and the Rainier National Forest.

Current American Indian Uses

An inventory of Native American religious use, practices, localities, and resources on the Mt. Baker-Snoqualmie National Forest was conducted in 1981 (Blukis, Onat, and Hollenbeck 1981). Although the knowledge of many religious sites and resources is private, the inventory does identify several localities in the Middle Fork Snoqualmie watershed that hold religious or spiritual significance for the Duwamish and Snoqualmie Indian communities.

Individuals and their families may have used culturally significant localities, identified in the watershed, for long periods. In some cases, special knowledge of these locations may have been passed from generation to generation. However, there is some indication that as land use privileges are lost on State and private lands, religious and cultural use of National Forest Lands is increasing. The Forest Plan “needs” section refers specifically to a need to recognize the changing patterns of cultural and religious use on the Forest.

Alternative 1(No Action) Environmental Effects

This alternative would result in the continuation of natural processes along the original course of the Lower Pratt River Trail. That is, the unused portions of tread and puncheon²² would continue

²² *Puncheon = Slabs of log (typically red cedar) that are laid down on log stringers to act as a ground-level bridge. Typically installed to circumnavigate wet areas or for stream crossings. Slabs are typically 4 – 6” thick, 3 – 4’ wide long and 2 – 3’ wide.*

to deteriorate to the point where the trail would no longer be recognizable. Users would continue to utilize “user-built” trails as well as segments of the original trail. This could result in disturbing or elimination of unknown/undiscovered heritage resource sites in the area.

Within the first mile of this project, there is a user built trail to Rainy Lake that does tie into the Lower Pratt River Trail. Along this user built trail is a wooden waterline. Currently, at this location the waterline has collapsed in places and possibly been moved off to the side of a user trail, probably for easier walking on that trail. Continued use of user-built trails and possibly the creation of new trails would further degrade this line.

Alternatives 2 and 3 Environmental Effects

In reconstruction of the first segment of the trail, approximately 10 feet of the wooden waterline along the user-built Rainy Creek Trail would be lost to the entire length of the line. Currently, at the point of the proposed crossing, the waterline is collapsed and possibly moved off to the side of a user trail for easier walking on that trail. However, once the trail has been rebuilt, that portion of waterline between the old and new trail would be less impacted by trail users and therefore serve as a protective measure for the lower portion of the waterline.

Over time, the integrity of the original trail not used in this proposed reconstruction/relocation would be lost due to being overgrown by vegetation, potential erosion, slumping, and the puncheon features would continue to deteriorate. Once the trail is reconstructed, the integrity of these features would be maintained however, the trail would be wider and maintained at the same level as when it was originally built.

Heritage Resources Cumulative Effects

There would be no cumulative effects to Heritage Resources because an appropriate inventory has been conducted for this undertaking and no properties eligible for the National Register of Historic Places (NHRP) have been located (2003) (SHPO²³ concurrence 2003). Further, there are no other projects the area of potential effect of this project that would affect the identified waterline or the Pratt Trail or any other known Heritage Resources.

Treaty Resources and Reserved Indian Rights

Treaties, statutes, and executive orders obligate federal agencies to fulfill certain trust responsibilities. The extent to which federally recognized tribes depend on the Middle Fork, Taylor River, and Pratt River drainages for treaty resources (related to hunting, gathering, and fishing on National Forest System Lands) are not fully known. For this project, the Forest Service fulfills its general trust responsibilities through the proper management of natural resources, as determined in the Forest Plan (as amended), and through continued consultation with Indian tribal governments.

²³ SHPO = State Historic Preservation Office.

Alternative 1 (no action) Effects

The rights of tribal members to exercise treaty rights on National Forest System lands would be unchanged. The accessibility of lands around the Middle Fork Snoqualmie River, Taylor River, and Pratt River would be unchanged from current conditions.

For anticipated effects to tribal hunting, gatherings, and fishing practices related to impacts to fish, wildlife, and plant habitat refer to the various resource sections for discussions of effects of implementation by alternative.

Alternatives 2 and 3 Effects

Access to the areas within the Pratt drainage would be restored to near historic levels (pre-1970s) when this trail was being fully maintained. There would be no identified effects to tribal hunting, gathering, and fishing practices related to impacts to habitat of fish, wildlife, and plants. Refer to the various sections for discussions of effects of implementation by alternative.

Treaty Resources and Reserved Indian Rights Cumulative Effects

The rights of tribal members to access National Forest System lands and exercise treaty rights would be as reserved in the Point Elliott Treaty. Any limited and minor cumulative effects to the Treaty resources of fish, wildlife, and plant species would be as disclosed in those sections of the EA.

Visual Resources

Affected Environment

Encompassing the entire project area is the land allocation “Alpine Lakes Management Area – Scenic Forest” (Forest Plan page 4-277) which underlies the LSR land allocation. The objective in this area is to retain or enhance viewing and recreation experiences. Developments and permitted uses in the seen area from recreation sites, roads, and trails within this allocation will meet adopted visual quality objectives. These proposed uses within the allocation will be integrated with the natural landscape (ALMP²⁴, pages 6 and 7).

Along with the “Scenic Forest” designation, the Pratt and Middle Fork Snoqualmie Rivers are recommended wild and scenic rivers. The recommended classification for both the Pratt and Middle Fork Snoqualmie is “Recreation.” For the Pratt River, the designation is from the wilderness boundary down to the confluence with the Middle Fork Snoqualmie River. For the Middle Fork Snoqualmie River, the designation is from the Taylor River to near the community of Tanner (Forest Plan page 4-33). Both of these rivers have a wild and scenic river sensitivity level of “1” (Forest Plan page 4-35). With a designated “recreation” river under a sensitivity level of one (1), the visual quality objective (VQO) is “Retention” within the first ¼-mile and “Partial

²⁴ ALMP = *Alpine Lakes Management Plan, Selected Alternative*

Retention” in the middleground and background (Forest Plan page 4-93). The definition of Retention is *human activities are not evident to the casual Forest visitor*; *Partial Retention* is defined as *human activity may be evident but must remain subordinate to the characteristic landscape* (Forest Plan, Glossary page 44).

With the proposed reconstruction/relocation of the Lower Pratt River Trail, the first segment of trail from the Middle Fork Trailhead down to an unnamed intermittent tributary is within ¼ mile of the Middle Fork Snoqualmie River, which is, “retention.” From this point, the trail moves away from the Middle Fork Snoqualmie, out of the ¼-mile corridor, and into middleground, this is “partial retention.” For the analysis to determine if the VQO’s for this area are being met, it was determined that the most likely place to see the trail location would be from Forest Road 56, the banks of the Middle Fork Snoqualmie and Pratt Rivers, or trails within the Alpine Lakes Wilderness.

Effects Common to All Alternatives

The effects to the visual resources within the Middle Fork drainage would be minimal to none with the implementation of any of the alternatives. This is because the cleared trail corridor is not visible from the riverbanks of the Middle Fork Snoqualmie or Pratt Rivers, Forest Road 56, or trails and viewpoints from the Alpine Lakes Wilderness due to terrain and vegetation. Since the improved trail is not visible from any of the selected viewpoints, this project would meet the Visual Quality Objectives (VQO’s) of retention and partial retention. The only portion of the Pratt Trail that is currently visible to the casual viewer is at the beginning of the trail as viewed from the Middle Fork Bridge or from the beginning of the Middle Fork Trail where the Pratt Trail turns right and runs south. This view of the Lower Pratt River Trail currently exists, with the only change after implementation of Alternatives 2 and 3 being an upgrade of the trail tread and brushing along each side of the trail.

For viewing from the Lower Pratt River Trail, clearing would involve removing approximately 4-feet of vegetation along both sides of the trail. Other than this brush and small tree removal, all other vegetation would remain intact thus meeting both of the visual quality objectives of retention and partial retention along the entire length of the Lower Pratt River Trail.

Alternatives 2 and 3 would install a bridge across Rainy Creek and possibly an unnamed tributary. As with the Lower Pratt River Trail, these structures would not be visible from any viewpoints along the river(s), roads, or from the wilderness. These bridge installations meets the VQO’s of retention and partial retention because the bridge would not be visible from any of the viewpoints along the river, road, or trails.

Visual Resources Cumulative Effects

The reconstruction/relocation of the Lower Pratt River Trail meets the VQO’s of retention and partial retention. Additionally, there are no other projects in the foreseeable future (for up to 5 years) being planned that would affect the same viewsheds around the Lower Pratt River Trail.

Other past, current, and reasonably foreseeable future projects that were assessed for this cumulative effect analysis are either located outside of the seen area of the trail or any residual effects are so minor that they would not, cumulatively, impact the visual resource.

Wilderness, Inventoried Roadless Areas, Unroaded Lands

All of the proposed reconstruction/relocation activities would occur outside of any congressionally designated Wilderness, Inventoried Roadless Areas, or unroaded lands. The nearest wilderness is the Alpine Lakes Wilderness with the closest boundary being approximately 2.5 miles to the southeast and 0.75 miles to the north. There would be no direct effects on the wilderness if any of the alternatives were implemented, including no action. Indirectly, there is the possibility that an increase in recreation use could occur in the Pratt Lake area (within the Wilderness) if alternatives 2 or 3 were implemented. However, it is expected that increased use of the Pratt Valley would be limited to the lower portion of the drainage. This is because it is approximately 8 miles to the Pratt Lake area and there are no unique destination areas (view points, unusual rock outcrops, lakes, etc.) above the Middle Fork River except a stand of old-growth timber that would draw visitors into the upper drainage. Further, it is easier to access the Pratt Lake area from Interstate 90 with only a 2.0 to 2.5 mile hike rather than hiking at least 8 miles up the Pratt. Since use in the Pratt Lake area of the wilderness is not expected to noticeably increase, this project would not add cumulatively to other effects to the wilderness by other decisions.

There are no parcels of Inventoried Roadless Area (IRA) between I-90 and Highway 2 (road to Stevens Pass) thus, there would be no direct, indirect, or cumulative effect to IRA lands since none are in the area of potential effect (MBS Land Management Plan, Appendix C page C-4).

Proposed Wilderness Expansion

On August 8, 2007, U.S. Representative Dave Reichert announced that he would be seeking to introduce a bill in Congress in the fall of calendar year 2007 that would expand the existing Alpine Lakes Wilderness by approximately 394,000 acres. The proposed boundary for this expansion would include lands between I-90 and the Middle Fork of the Snoqualmie River, including the Pratt River (The Seattle Times, Section B August 9, 2007). With available mapping, the propose wilderness expansion would include the segment of the Pratt Trail in this analysis.

The Lower Pratt River Trail runs along the Middle Fork Snoqualmie River up past the Pratt River, past the location of the Middle Fork Trail Bridge, and up towards the Goldmyer Hot Springs and beyond has been in existence since the beginning of the 20th century (Refer to the *Introduction* in Chapter 1 of this document). Further, the segment of trail that is included in this analysis is a "System Trail" and is in the inventory of trails within the MBS Land and Resource Management Plan (LRMP, Table E-1, pages E-12 and E-21).

Under the Alpine Lakes Area Management Plan (ALAMP), under "Management Direction, Item 3: *Portions of the Wilderness without trails will be managed to remain trail-less* (ALAMP, 1981,

Appendix B, page 160). By definition, “Trail-less” means: *Areas are greater than 500 feet from system trails. Concentration of users is very low. In these areas, the natural processes and conditions have not and will not be measurably affected by the actions of users. No facilities are provided* (ALAMP, 1981, Glossary, page 131).

The Lower Pratt River Trail exists and if the affected lands around the trail are added to the Alpine Lakes Wilderness, the lands where the trail exists would not be considered “Trail-less.” Conversely, if these lands are included in the Alpine Lakes Wilderness, then any other future trail proposals (e.g., Rainy Lake) would not be considered because these lands would be considered trail-less.

A trail is that is being reconstructed and/or relocated outside of a wilderness, the costs of completing the project are approximately \$75,000 - \$100,000 per mile.²⁵ (These costs exclude the construction of bridges). When constructing a trail in a wilderness, the costs can go as high as two and one-half times, compared to a non-wilderness setting. This is because power tools cannot be used within the wilderness (e.g. chainsaws, powered winches, powered excavators, powered wheelbarrows, etc.).

Whether trail construction is in wilderness or non-wilderness, the same operations may occur. That is, clearing brush and debris, clearing the trail of downed logs, grubbing (removing root masses and rock) and excavating the ground to level the tread base and/or to place the trail into a hillside. Further, drainage features/structures would be added to aid in controlling runoff to prevent erosion, apply a tread surfacing material if needed, such as gravel, and complete erosion control measures such as applying seed, mulch, and fertilizer.

The costs of bridge building for hiking trails in a non-wilderness area are approximately \$1,500 to \$1,800 per foot. If the bridge were in a wilderness, the costs for the same bridge would cost approximately 30% more. Whether constructing a hiker only bridge or hiker/pack animal bridge, the super-structure, footings, and methods of construction are essentially the same. The difference between the two is deck width and maybe the types of materials. With a hiker only bridge, the deck width is approximately 4 feet but with a hiker/pack animal bridge, the deck is approximately 6 feet wide. Thus, the cost difference between the two bridges is approximately 20 to 30% more for the decking materials, which further increases the cost of the bridge.

The following table indicates the various costs of reconstruction/relocation of the Lower Pratt River Trail and the costs of building a bridge at Rainy Creek.

²⁵ *Based on District knowledge of contracts that have been administered over the past 2 – 3 years.*

Table 20: Trail Construction Costs

Non-Wilderness Trail and Bridge Construction			
Trail Construction		Bridge Construction	
Cost Per Mile	\$75,000 - \$100,000	Costs per Foot	\$1,500 - \$1,800
Cost for 3.25 Miles	\$243,750 - \$325,000	Cost for 65' Bridge	\$97,500 - \$117,000
Wilderness Trail and Bridge Construction			
Trail Construction		Bridge Construction	
Cost Per Mile	\$187,500 - \$250,000	Costs per Foot	\$1,950 - \$2,340
Cost for 3.25 Miles	\$609,375 - \$812,500	Cost for 65' Bridge	\$126,750 - \$152,100

As shown in the previous table, the total cost for the Lower Pratt River Trail (including a bridge), in a non-wilderness setting, could cost between \$341,250 and \$442,000.²⁶

In a wilderness setting, the total cost for the Lower Pratt River Trail (including a bridge) could be between \$736,125 and \$964,600.

Several trails exist within the proposed wilderness addition. All of these trails are on a maintenance schedule and maintenance would continue whether they are included in the wilderness or not. Further, the Lower Pratt River Trail is an existing trail and following this reconstruction/relocation project, it too would be maintained, whether it is included in the wilderness or not. In either case, neither the Lower Pratt River Trail nor the trail maintenance of trails 1003 and 1035 would have an effect on the wilderness values in this area thus there would be no cumulative effects.

Outside of wilderness areas, except in special situations, there are no limitations on trails in relation to user-group sizes. Thus, if the land allocations remain as they are, groups of any size of individuals or organizations can use the trails in and around the Middle Fork drainage including the Pratt/Middle Fork Trail systems. If the proposed Alpine Lakes Wilderness expansion becomes reality, then all trails included within this wilderness addition may²⁷ fall under the standards and guidelines of the *Alpine Lakes Area, Land Management Plan FEIS*. Under Appendix B, page 161: “*The wilderness currently has a party size limit of 12 persons or any combination of persons and livestock totaling 12. A letter of authorization is required for any party size in excess of the limit.*”

As described in Chapter 1 of this document, the rebuilt Lower Pratt River Trail provides an enhanced hiking opportunity that is outside the current wilderness boundary. There is the possibility that this trail would help relieve the hiking pressure put on other trails within the

²⁶ Based on District knowledge and costs of trail and bridge contracts that have been administered over the past 2–3 years.

²⁷ At this time, the proposed legislation does not discuss specific management direction for the lands involved in the Wilderness Expansion Bill.

wilderness that are currently overcrowded and in some cases overused. Specifically: *“The overall wilderness management goal will be to reduce or eliminate the adverse effects associated with human use, when use approaches or exceeds the established, “Limits of Acceptable Change” (LRMP page 4-39); and “Hiker and interpretive trails should be provided near most large campgrounds to provide for visitor use and enjoyment. Some of these should be suitable for barrier free access” (LRMP, Appendix E, page E-7) and “... high levels of recreation development outside the wilderness...” and “Day users would not be restricted, rather encouraged to use areas outside the wilderness” (LRMP, page 4-102). If this area is included in the wilderness, it is believed that the improved Pratt Trail would still act as an alternate route and would accomplish the same goal of providing another opportunity away from traditional hiking trails in the wilderness.*

Public comments were received that stated, constructing new trails in other locations would be a better investment of limited funds than spending money to reconstruct the Lower Pratt River Trail. One example is to rebuild the first segment of the Pratt Trail and then build a new trail up to Rainy Lake. As of this writing, Rainy Lake has never had a designed, “system” trail however; a user built trail does exist to access the Lake. This trail to Rainy Lake, if built, would be considered a brand new trail.

If this portion of the Pratt drainage becomes wilderness, then at no time could a trail be built to Rainy Lake because there is no system trail and the lands it would travel through would be considered “Trail-less.” This applies to all areas in the Pratt drainage as well as other lands that are being considered in the potential Wilderness Bill.

Environmental Justice

In the past decade, the concept of Environmental Justice has emerged as an important component of Federal regulatory programs, initiated by Executive Order No. 12898 *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*.

Environmental justice is defined as the pursuit of equal justice and equal protection under the law for all environmental statutes and regulations, without discrimination based on race, ethnicity, or socioeconomic status. The minority and low-income groups living in King County work in diverse occupations. Some minorities, low-income residents, and Native Americans may rely on forest products or related forest activities for their livelihood.

The demographics of the affected area were examined to determine the presence of minority, low-income, or tribal populations in the area of potential effect. The following table shows the race and ethnic profile of King County compared to the entire state of Washington, as of the year 2000. (Data from the website at: <http://www.ofm.wa.gov/census2000/>).

Table 21: Race and Ethnic Profile, 2000, King County

	King County	Washington State
Total Population (2000)	1,737,034	5,894,121
	Estimated Population and % of County, Total*	Estimated Population and % of State, Total*
Black or African American	93,875 (5.4%)	190,267 (3.2%)
American Indian, Alaska Native	15,922 (0.9%)	93,301 (1.6%)
Asian	187,745 (10.8%)	322,335 (5.5%)
Native Hawaiian and other Pacific Islander	9,013 (0.5%)	23,953 (0.4%)
Hispanic Origin (of any race)	95,242 (5.4%)	441,509 (7.5%)
White	1,315,507 (75.7%)	4,821,823 (81.8%)
Other Race	44,473 (2.5%)	228,923 (3.9%)

*Numbers are rounded.

Alternative 1 (No Action) Effects

Not reconstructing/relocating the 3.25 miles of the Pratt Trail would continue to limit access for those wishing to visit the Pratt valley and further, limits use of the Pratt area for tribal members.

Alternatives 2 or 3 Effects

Implementation of either Alternative 2 or 3 would restore easy trail access to traditional use areas and would be expected to have no disproportionately high or adverse effects to low income or minority populations. There would be no cumulative effects.

Soils

The geomorphic character of the Middle Fork Snoqualmie River valley has been strongly influenced by glacial and fluvial activity. The valley has experienced multiple advances and retreats of alpine glaciers. Glaciers gouged and scoured the valley, which resulted in a relatively flat, broad valley floor with steep side slopes. Deposition of glacial till (frequently very compacted or dense material), glacial outwash, and glacial lake bed sediments (clay) that developed as the glaciers retreated has buried much of the bedrock in the valley bottom. Bedrock geology within the Middle Fork Snoqualmie River watershed consists of both intrusive igneous material (primarily granodiorite) as well as extrusive igneous rock (various varieties of andesite).

Soils within the vicinity of the Lower Pratt River Trail have developed within materials that have been transported and deposited by glacial activity, gravity, or water. Some soils also have a surface layer of volcanic ash or pumice. The glacial and colluvial parent material contains a relatively high rock and gravel content that results in well drained surface soils in most locations. However, there is a layer of dense glacial till within some locations of the project area. Water

infiltration is restricted at this layer, which frequently results in either a perched water level or seasonally wet soil condition.

Within this drainage, in places, there is a dense layer of clay underlying the upper soil layers. This clay layer becomes very slick and sticky when wet and can be very erosive depending on the slope and aspect of the surrounding lands. As of this writing, no extensive excavations have been completed along this route thus it is unknown exactly where or if clay soils exist along the trail route. As described in the alternative descriptions, the last 1.0 mile of trail would be on railroad grades or truck road(s). Clays on these routes is not an issue since the roads/grades are rocked or the grade has been raised and encountering clay soils is not likely. If these clays were to be encountered, it would most likely occur along the remaining 2.25 miles of trail (from the Middle Fork Bridge down to the existing grades/roads).

Effects Common to All Alternatives

Previous soil disturbance (compaction and/or displacement) and loss of productivity has occurred in the Pratt River drainage through truck-road construction and railroad-grade construction associated with logging. Further, based on previous experience, it is known that soil displacement more than likely occurred during logging due to practices that were employed to drag the logs to a log landing, especially along skid roads and yarding corridors. Further, much of this disturbance is evident today however no soil disturbance surveys were completed and the actual percentage of compaction and/or displacement is unknown. The Forest-Wide standards and guidelines for soils in the MBS Forest Plan state: *“No more than 20% of an activity area may be severely burned, compacted, puddle, or displaced as a result of the activity. Only permanent features of the transportation system will remain in a detrimentally compacted, puddle, and/or displaced condition”* (Forest Plan, page 4-117, Item 3).

Generally, trail treads are approximately 18” to 24” in width. For a trail 3.25 miles in length, the total area that would be considered compacted is 0.6 acres to 0.8 acres. Currently, approximately 2.5 miles (0.45 acres – 0.61 acres) of the Lower Pratt River Trail paralleling the Middle Fork still exists and can be considered a permanent feature that has remained in a “detrimental” condition. Based on the proposed action, approximately 1.30 miles of the original trail would be rebuilt and approximately 1.0 miles of the trail would be moved onto already compacted roads and railroad grades. The remaining 0.95 miles (approximately 0.17 acres to 0.23 acres) would be newly compacted (Refer to the description of the proposed action).

Map codes “J-8” and “S-8” have been identified within the Pratt drainage. The map code J-8 was used in the Forest Plan to designate unsuitable forest land not managed for timber production because there is no reasonable assurance that these lands can be adequately restocked within 5 years (Forest Plan, Glossary page 19). The map code S-8 was used in the Forest Plan to designate unsuitable forest land not managed for timber production because technology is not available to prevent irreversible damage to soil productivity, or watershed conditions. (Forest Plan, Glossary, page 35). Neither of these soil types were previously identified or recently observed through on the ground field surveys within the project area.

As stated previously, it is not known exactly where clay soils may exist (if at all) along the trail route. However, these clays have been encountered while completing other projects specifically, the first one mile of the Middle Fork Trail from the bridge heading east and clay was encountered during construction of the Middle Fork Campground. Construction of these two projects was completed without detrimental effects to the environment as a result of these soils. For the campground, layers of rock and fill material (without clay) was placed over the clay surface and drainage structures were installed. This effectively separated the clay from the running surface and no problems have occurred nor have erosion problems occurred since the project was completed. For the Middle Fork Trail, a combination of installing “turnpike,”²⁸ sections of coarse rock, and sections of smaller gravels (or a combination of the three) was installed to deal with the clay. Once these construction methods were complete, clay soils are no longer an issue. To further protect these soils and to maintain the trail, trail use by pack animals is restricted to the driest time of the year.

Based on the experiences from past projects, it is estimated that if clays are encountered on the Lower Pratt River Trail, techniques incorporated on previous projects would be effective in protecting any clay soils on this project. Thus, there would be no measurable effects as a result of encountering these soils.

With the implementation of alternative 1, the Pratt Trail would remain in its current condition. If clay soils are currently exposed, any existing erosion would continue to occur. Where there is a trail crossing a stream (especially Rainy Creek), the potential for soils to enter the stream is great due to erosion. This is because there is no bridge at this crossing and the crossing has not been maintained over time. With the implementation of Alternatives 2 or 3, user built trails would be rehabilitated and bare soils would be revegetated. Further, inadequate trail conditions would be improved so the potential for erosion is lessened by installing trail structures and drainage devices. Further, whether a bridge is constructed over the streams or the approaches are designed, the potential for eroded soils entering the streams is much reduced.

Soils Cumulative Effects

Other than ongoing annual or semi-annual maintenance of trails 1003 and 1035, there are no other past, present, or future projects in the Pratt drainage that would add cumulatively to the effects of this trail project. For trails 1003 and 1035, trail maintenance may occur and overlap the effects of this project in “time” but, the effects would not overlap in “space.” Even if effects would combine cumulatively (e.g. soil disturbance) the effects would be so small to be negligible and would not be measurable.

²⁸ *Turnpike is a section of trail where rails (logs) line the sides of the trail and then fill material (sometimes large rock) is placed between the logs and then gravel is placed on top of the fill.*

Public Safety

The highway, (I-90), that connects Seattle to destinations in Eastern Washington passes through segments of the Mt. Baker-Snoqualmie National Forest. Along this corridor there are several exits accessing roads that lead to trailheads and campgrounds up and down the corridor. Two such exits are #45 and #47, which lead to three trailheads that provide access to the Alpine Lakes Wilderness. The trails at exit 47 access several lakes and multiple destinations including Pratt Lake. Further, the trails at exit 45 access the lower drainages but side trails also provide access to Pratt Lake. Lastly, there is a maintained trail within the Pratt River drainage that parallels the Pratt River (trail 1035) and it ties into the trails just north of Pratt Lake. This trail (1035) provides access from the upper reaches of the Pratt drainage down to just above the confluence of the Pratt and Middle Fork Snoqualmie River.

As it exists now, for users that access trail 1035 from the Pratt Lake area, this trail can be considered a one-way trail. This is because there is no adequate trail that accesses the lands from the end of trail 1035 (at the Middle Fork Snoqualmie) to the Middle Fork Trail Bridge nor is there an improved crossing of the Middle Fork River except at the Middle Fork Trailhead (3.25 miles to the east). Thus, those users wishing to access Forest Road 56 (on the west side of the Middle Fork Snoqualmie) have to pick-and-choose their route along visible segments of the remaining Lower Pratt River Trail that parallels the Middle Fork Snoqualmie up to the Middle Fork Bridge or the only other choice is to wade the Middle Fork Snoqualmie River. Depending on the time of year, crossing the Middle Fork Snoqualmie River can be very hazardous if not impossible due to elevated flows in the river, especially in the winter.

Occasionally, various forest users will become lost while accessing trails along the I-90 corridor. Typically, when a hiker becomes lost, the person leaves the trail and cannot find their way back to their starting point. An example, a hiker became lost in the summer of 2007 near Snow and Gem Lakes. When search and rescue crews were activated, not knowing where the lost person may have gone, they did access the Pratt drainage but from the top. This is because there is no easy access from the bottom. Having to come in from the top caused a delay in search efforts, which in the right circumstances could mean the difference between life and death, if the lost party was in the bottom of the Pratt drainage. This is especially true during the winter months when the trails in the upper basin are obscured by snow. As an example, in the winter of 2003/2004, a search for a lost cross-country skier was initiated near Snoqualmie Pass. Eventually, the skier was found and he was located in the upper portions of the Pratt drainage. Unfortunately, this person suffered from hypothermia and lost both of his legs due to frostbite.

Lastly, if a forest user was injured and/or lost in the Pratt drainage, it would be very difficult if not impossible to extricate that person out through the lower drainage, especially if a stretcher were involved. In this scenario, the only option would be to carry the person out over the top to I-90 or utilize a helicopter. If the weather is poor and a helicopter is not feasible, then there would be no choice but to try to pack the victim out through the brush or go back over the top. A river crossing could be attempted but that would depend on the time of year. Even if the water were

low, a river crossing while carrying a stretcher holds a certain amount of risk not only for the victim but also for the rescuers.

From a public safety search-and-rescue standpoint, the ideal scenario would be to have an access bridge across the Middle Fork Snoqualmie River. If positioned properly, this bridge would provide easy and quick access to the lower Pratt drainage and if a search and rescue operation were being conducted, it would save time in searching this lower drainage. However, installing a bridge across the Middle Fork is not considered practical due to the cost, the lack of an adequate crossing location, and the possibility of being damaged or washed away by a flood. This is evidenced by the fact that at least one railroad-bridge (First bridge, 1935, reference Pratt River Logging Camp Evaluation) and one truck-bridge (mid-1980s, reference, long-time employee) and one foot-bridge (Refer to Alternatives Considered but Eliminated from Further Study) have been washed away over the past several decades. Given that, a bridge is not feasible, the next best thing would be to construct a trail that would access the lower Pratt valley.

With the no action alternative, the Lower Pratt River Trail along the Middle Fork Snoqualmie River would not be improved and would remain inadequate. Access to the lower Pratt Valley would continue to be restricted and public safety would not be improved.

With the implementation of Alternatives 2 or 3, a trail accessing the lower Pratt Valley would be constructed and access to the lower valley (from a public safety standpoint) would improve greatly. If implemented, search and rescue personnel can reach the lower Pratt valley in a short period of time and begin necessary search procedures quickly. This is especially important if the upper elevations are covered in, deep snow where traversing the upper slopes can be slow and treacherous. If extrication of a victim were necessary, rescuers could transport a victim out along the newly reconstructed/relocated trail, which would save time and could be essential in saving lives. With Alternatives 2 and 3 there would be no cumulative effects.

Air Quality

The Alpine Lakes Wilderness whose current boundary is located 2.5 miles to the southeast and 0.75 miles to the north of the project area is a Class I area for air quality protection. Visibility is a value that is protected primarily within the boundaries of Class I areas. The only other wilderness on the MBS that is currently classified as Class I is the Glacier Peak Wilderness.

No burning is planned in the Lower Pratt River Trail reconstruction/relocation project, so there would be no impacts on visibility from smoke. Any dust from proposed repair work would be short-term in duration (a few weeks at most) and very site-specific. There would be no effects past the reconstruction/relocation phase. There are no cumulative effects since no other projects are being proposed, except ongoing annual maintenance of facilities.

Prime Forestland, Farmland, and Rangeland

Prime forestland, as defined by Natural Resources Conservation Service²⁹ may be found in and around the project area; however, none of the alternatives including no action would have any measurable impact on such land. There is no prime farmland or rangeland within the project area.

Wild and Scenic Rivers

As discussed under “Other Relevant Laws and Direction” (page 18 of this document), the Mt. Baker-Snoqualmie National Forest, Forest Plan recommends the Middle Fork of the Snoqualmie River and the Pratt River as “Recreation Rivers” under the Wild and Scenic Rivers Act. As defined on page 14 of this document, the Middle Fork Snoqualmie and Pratt Rivers are under land allocation “5A – Recommended Recreation Rivers” (Forest Plan page 4-33). With this allocation: Evidence of a full range of management activities may exist, including existence of low dams, diversions, residential development, and forestry uses (past and present timber harvest). The rivers are readily accessible by railroad and bridge crossing. Streamside bank is generally natural condition. Water quality is such that waters are fishable and people can swim, or a water improvement plan exists or is under development in compliance with Federal and State laws (Forest Plan, page 4-189).

For the Middle Fork Snoqualmie River, the outstandingly Remarkable Values of this river are recreation, fish, and wildlife (USDA FS, Appendix E page E-5). The Pratt River is recommended for inclusion into the system with segments that would be designated wild or recreation with the designation of Recreation River in the location of this proposed project (USDA FS 1990, page 4-189 and Appendix E page E-244). For the Pratt River, the outstandingly Remarkable Values of this river are recreation, geologic, fish, wildlife, and ecological (USDA FS, Appendix E page E-5).

The proposed trail improvements described in this document would not reconstruct or relocate the Lower Pratt River Trail so that it would cross either the Pratt or Middle Fork Snoqualmie Rivers. At its closest point, the reconstructed trail is no closer than 500 feet from the Middle Fork Snoqualmie River (except at the beginning where the trail begins at the Middle Fork Snoqualmie Trail Bridge) and it is no closer than ¼ mile from the Pratt River (refer to the alternative map on page 32 of this document).

The following describes the effects of this reconstruction/relocation project on the outstandingly remarkable values for both the Middle Fork Snoqualmie and Pratt Rivers³⁰:

Recreation: Both rivers have the outstandingly remarkable value of recreation, which is defined as: *“The area provides a diversity of high quality recreation opportunities or one exceptionally*

²⁹ Land capable of growing wood at the rate of 85 cubic feet per acre per year at culmination of mean annual increment.

³⁰ Refer to the Appendix-E page E-4, of the USDA FS MBS Forest Plan for definitions of the outstandingly remarkable values for wild and scenic rivers.

high quality recreation opportunity.” The entire Lower Pratt River Trail including the portion included in this analysis was in existence when this value was applied to these two rivers. Thus, implementation of the alternatives in this document will not change any factors that were originally found in this area necessary to apply this value.

Fish: Both rivers have fish as an outstandingly remarkable value with the definition of: *“The area contains unique resident or anadromous values for “rare,” “relatively rare,” or “unique genetic variant” species managed by the State, or high species diversity, very high fish production, or unique fishing experiences.”* No anadromous salmonids or bull trout are present in the Middle Fork watershed due to Snoqualmie Falls (refer to page 69 of this document). However, aquatic surveys have documented the presence of resident populations of rainbow trout, cutthroat trout, eastern brook trout, mountain white fish, and sculpin. The entire Lower Pratt River Trail including the portion included in this analysis was in existence when this value was applied to these two rivers. With Alternative 1 (no action), there would be no change to any factors that were originally found in this area necessary to apply this value. With the implementation of Alternatives 2 or 3, there would be no change to any factors that were originally found in this area for this value however, user built trails would be rehabilitated. Rehabilitation would reduce the potential for current and potential erosion and would allow native vegetation to grow again (refer to page 29 of this document). Thus, the chance for sediment reaching these rivers is reduced.

Wildlife: Both rivers have wildlife as an outstandingly remarkable value that has the definition of: *“Habitats for species identified by federal or state agencies as threatened or endangered; or critical habitats of species of concern.”* As with other values, the entire Lower Pratt River Trail including the portion included in this analysis was in existence when this value was applied to these two rivers. With the implementation of this project, the overall core habitat for grizzly bear within BMU #01 would be above the 1997 baseline level (page 63 of this document). Further, either there is no habitat or there would be no effect to habitat or there would be no removal of wildlife habitat with this project (pages 60 through 66 of this document).

Geologic: This outstandingly remarkable value was assigned to the Pratt River only. It has the following definition: *“The area displays an individual, unusual, or unique geologic feature or a combination of several distinctive geologic features.”* As with the other values, the entire Lower Pratt River Trail, including the portion in this analysis, was in existence when this value was applied to the Pratt River. The only segment of the Pratt River Trail along the Pratt River that would be affected is that section near the confluence of the Pratt and Middle Fork Snoqualmie Rivers and this segment would be rebuilt or possibly moved onto an existing skid road or abandoned logging road. The segment of trail that would be affected is on a “flat” area that appears to have been tractor logged and there are no apparent geologic factors in or immediately adjacent to this area. Thus, no geologic features would be affected.

Ecological: This outstandingly remarkable value was assigned to the Pratt River only. It has the following definition: *“The area contains a high quality example of an unusual ecological community or a plant species of special interest listed by the state or local government.”* As with

the other values, the entire Pratt River Trail including the portion included in this analysis was in existence when this value was applied to the Pratt River. The only segment of the Pratt River Trail along the Pratt River that would be affected is that section near the confluence of the Pratt and Middle Fork Snoqualmie Rivers and this segment would be rebuilt or possibly moved onto an existing skid road or abandoned logging road. There are no known or suspected Federally Endangered or Threatened plant species on the Mt. Baker-Snoqualmie National Forest. The district biologists found no new sites of endangered, threatened or sensitive plant species within this project area (page 79 of this EA). Implementation of the alternatives has a slight possibility of affecting *Platanthera* and/or *Diplophyllum* due to construction activities. The possible disturbance of these plants can be mitigated by having a botanist mark known locations of these species prior to beginning construction activities and then avoid these sites as construction progresses (page 80 of this EA and Mitigation Measures page 33 of this EA).

During the writing of the Forest Plan for the Mt. Baker-Snoqualmie National Forest (USDA 1990), 47 rivers on the Forest were studied for eligibility to be included in the National Wild and Scenic Rivers System. These rivers were judged to possess “outstandingly remarkable” resource features and, thus, eligibility for Wild and Scenic River designation. The Middle Fork Snoqualmie and Pratt Rivers were two of the 47 named rivers (refer to Appendix E, pages E-1 through E-5).

The next step in the process was to evaluate eligible rivers and to determine their classification. Classification was based on the relative level of development (existing land uses and access) within the river corridor. Each eligible segment qualified as one of the three designation categories defined by the Wild and Scenic Rivers Act: Wild, Scenic, and Recreational. The last step in studying potential eligibility is to determine suitability. This step provides the basis for the decision to recommend designation or non-designation of the river Appendix E, page E-6 and E-13). Based on the analysis in the Forest Plan, the Pratt River was eligible for the designation of “Wild” from the headwaters at Melakwa Lake to the current Alpine Lakes Wilderness. Further, that segment of the Pratt River below the current Wilderness boundary to the confluence with the Middle Fork Snoqualmie River is designated as “Recreation” (Forest Plan, Table 4-5 page 4-33). Standards and Guidelines for “Recreation” Rivers under the Wild and Scenic Rivers Act are listed in the Forest Plan under Land Allocation 5A, beginning at page 4-189.

As has been discussed, Bill HR 4113 “*Alpine Lakes Wilderness Additions and Wild Pratt River Act of 2007*” had been introduced in the House of Representatives which would expand the Alpine Lakes Wilderness in the State of Washington. As a part of this Bill, all of the Pratt River would be designated as “Wild” (as defined in the Wild and Scenic Rivers Act) (page 1 of this EA). Whether or not the Pratt River is designated as Recreation or Wild, the existing outstandingly remarkable values will not change (Appendix E, page E-5). However, if the designation is changed to Wild, the Desired Future Condition would change. The allocation would become 5C. With this allocation, the desired future condition would be “*Wild Rivers are generally inaccessible by road, but can be reached by trail or water. Vegetation is varied in size, species, and age and is predominately the product of natural succession. Vegetation may vary from natural openings to stand of mature and old growth timber. The opportunity to interact*

within a natural environment away from the sights and sounds of man is available. A high degree of challenge is offered” (Forest Plan page 4-194). Whether or not the Pratt River designation is changed to Wild, the proposed project would have no effect on the outstandingly remarkable values listed above (as determined previously). This is because the Pratt River Trail, though inadequate, does exist and the majority is being maintained and does provide access (as stated in the Desired Future Condition). Other than work on a small segment of trail in the Pratt River Riparian Reserve, there are no proposed activities that would directly or indirectly affect the Pratt River or its banks. Thus, since there are no effects, there are no cumulative effects.

Wetlands and Floodplains Effects (EO 11988 and 11990)

No wetlands were identified along the 3.25 mile length of the Lower Pratt River Trail. With the segments of trail that would be relocated or where the trail intersects wet areas, the tread would be routed to avoid any ground water that may be surfacing along the route. If ground water cannot be avoided, construction methods, such as installing puncheon, would be employed to have the least impact on this resource. As stated previously, the original trail location paralleled the Middle Fork Snoqualmie River and this trail did enter the floodplain of that river. However, with this proposal, the segments of trail that would be reconstructed as well as areas where the trail would be relocated are outside of the floodplain. There are no cumulative effects.

Irreversible and Irretrievable Commitment of Resources

An irreversible commitment of resources results from a decision to use or modify resources that is renewable only over a long period of time. The actions described in this document would not cause any irreversible commitment of resources other than removing rock from a commercial source, for use in the proposed trail project for surfacing on the trail tread.

An irretrievable commitment of resources occurs when opportunities are foregone for the period of time that the resource cannot be used. The Lower Pratt River Trail is a reversible commitment because it is possible to obliterate the trail and return the area to its previous condition. However, the Lower Pratt River Trail is not scheduled for obliteration and thus represents an irretrievable commitment of resources for as long as the trail is a valued asset to the Forest users. A resource that would be irretrievably lost as a result of the commitment to site reconstruction/relocation is an irretrievable loss of wildlife habitat where vegetation is removed (*Vegetation would be removed four feet on either side of the trail tread for the length of the trail, which equates to approximately 3.2 acres of clearing over the distance of 3.25 miles*).

Potential Conflicts with Plans and Policies of Other Jurisdictions

Numerous governmental agencies, Tribal Governments (and representatives) as well as private individuals and organizations have been contracted in the preparation of this analysis. There are no known conflicts between the alternatives discussed in this document and the plans and policies of these other jurisdictions.

Chapter 4 - Agencies and Persons Consulted

(Consult Project File for Individuals Contacted)

U.S. Army Corps of Engineers	Boeing Climbing Club
U.S. Fish and Wildlife Service	Cascade Designs Inc.
Washington State Department of Ecology, Northwest Regional Office	Cascade Gateway Foundation
Washington State Department of Fish and Wildlife	Cascade Land Conservancy
Washington State Department of Natural Resources	Champion International Corp.
Washington State Department of Wildlife	City of Issaquah Parks and Recreation
Washington State Senate, Dino Rossi	Cycle Path
Washington State Senate, Pam Rpach	HDR Engineering
Honorable Jennifer Dunn, House of Representatives	MidFORC
Honorable Slade Gorton	Mountain Bicycles
Honorable Patty Murray	Mountain recreation Management
Mayor, City of North Bend	Mountains to Sound Greenway
King County Executive, Ron Sims	National Audubon Society
King County Parks	North Cascades Conservation Council
King County Roads Division	Northwest Coalition, Fish and Wildlife
Metropolitan King County Council	Northwest Ecosystem Alliance
Alpine Lakes Protection Society	Northwest Regional Council of Fly Fisherman
Back Country Bicycle Trails Club	Northwest Wilderness Programs
Back Country Horsemen	Pacific Crest Biodiversity Project
BBTC	Preston, Gates, and Ellis
Bertschi School	Raging River Riders
	Seattle Audubon Society
	Sierra Club

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Sierra Club – Road to Trails	University of Washington, Environmental Outlook
Sierra Club/Cascade Chapter National Parks and Wilderness Commission	University of Washington Fisheries
Signpost	Valley Camp
Single Track Mind Cycling Club	Waterways 2000
Snopac	Washington Kayak Club
Snoqualmie Valley Trail Club	Washington State Snowmobile Association
Snoqualmie Valley Rifle Club	Washington State Sportsmen’s Council
The Mountaineers	Washington State Sportsmen Council, Forest Conservation Committee
The Mountaineers Conservation Division	Washington Trails Association
The Nature Conservancy	Washington Wilderness Coalition
The Wilderness Society	Washington Wilderness Coalition
Trailblazers	Western Washington Mountain Bike Association
Trout Unlimited	Weyerhaeuser Company
University of Washington, Climbing Club	
University of Washington, College of Forest Resources	

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