Upper Charley Subwatershed Ecosystem Restoration Projects

Final Environmental
Impact Statement

USDA Forest Service
Pacific Northwest Region

Umatilla National Forest
Pomeroy Ranger District

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FINAL ENVIRONMENTAL IMPACT STATEMENT
FOR
UPPER CHARLEY SUBWATERSHED
ECOSYSTEM RESTORATION PROJECTS
GARFIELD COUNTY, WASHINGTON

Abstract: This Final Environment Impact Statement (FEIS) for the Upper Charley Subwatershed Ecosystem Restoration Projects has been developed to provide information regarding changes in the environmental analysis that have occurred since the release of the Draft Environmental Impact Statement (DEIS) in April 2000. The Record of Decision (ROD) also includes important comments on the DEIS which were submitted by Federal, State, local agencies and the public, and provides a response to those comments. The changes to the DEIS resulting from public and agency comments were minor. Therefore, minor changes may be written on an errata sheet (s) and attached to the EIS instead of rewriting the DEIS into a Final EIS. Only the comments, or responses, and changes need to be circulated (CFR 1500.4 [m]). The entire DEIS with a new cover sheet will be filed as the Final Environment Impact Statement (40 CFR 1503.4[c]). This FEIS is intended to provide the basic information on changes and clarification which were made to the DEIS in a concise, easily understandable manner.

A Record of Decision (ROD) is included in this FEIS. Agency and public reviewers have provided the Forest Service with their comments on the DEIS. All reviewers had been informed of their obligation to structure their participation in the National Environmental Policy Act process so that it is meaningful and alerts the agency to the reviewer's position and contentions [Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519,533 (1978)].

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THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE UPPER CHARLEY SUBWATERSHED ECOSYSTEM RESTORATION PROJECTS IS ORGANIZED ACCORDING TO THE FOLLOWING FORMAT:

- **Record of Decision with Appendices**
- **Summary of the Draft environmental Impact Statement (DEIS)**
- **Public and Agency Letters and Comments**
- **Forest Service Response to Comments**
- **Errata Sheets describing changes, additions, and clarifications made to the DEIS**

Record of Decision

Upper Charley Subwatershed Ecosystem Restoration Projects EIS

USDA Forest Service, Region Six
Pomeroy Ranger District
Umatilla National Forest
Garfield County, Washington

INTRODUCTION

Decisions To Be Made

This Record of Decision (ROD) documents my decision and rationale for the selection of management activities to be implemented in the Upper Charley analysis area. These activities will implement the Umatilla National Forest Land and Resource Management Plan (Forest Plan).

With this Record of Decision, I am selecting:

1. The location, acreage, and extent of prescribed burning activities.

2. The location and acreage of commercial and non-commercial tree removal, types of silvicultural treatments and harvest methods, and the amount of road reconstruction and temporary road construction necessary to provide project access and achieve other resource objectives.

3. Watershed restoration/enhancement projects, including wildlife and fish habitat projects (cisterns, bat boxes, fish structures, road obliteration, etc.) to promote wildlife and fish sustainability.

4. Project monitoring and management requirements needed to assure that design criteria and management practices are implemented effectively.

I am the responsible official for this project. The scope of my decision is limited to commercial and non-commercial tree removal, temporary road construction, road reconstruction, prescribed burning, access management, wildlife and fish habitat restoration/enhancement projects, planting of native grass and shrubs, and related actions described in the Upper Charley Subwatershed Ecosystem Restoration Projects Environmental Impact Statement (EIS) and this Record of Decision (ROD). The decision I am making is site-specific not programmatic, and is not a general management plan for the area.

OVERVIEW OF THE PROJECT AREA

Located on the Pomeroy Ranger District, the Upper Charley analysis area is within the boundary of the Upper Charley subwatershed, which is part of the Asotin Creek watershed. The Upper Charley analysis area is in Garfield County, Washington, encompassing a gross area of approximately 7,650 acres. It includes all, or portions of Sections 11-14, 22-28, and 33-36, of T.9N., R.42E.; Sections 8, 17-19, and 30, of T.9N., R.43E.; and Sections 3 and 4 of T.8N., R.42E., W. M. surveyed.

All proposed activities, including road management, for the Upper Charley subwatershed are outside the boundaries of any inventoried roadless or wilderness areas. Road management activities identified in the DEIS followed the agency's February 12, 1999 (EIS Chapter IV page 64) interim direction. This policy has since been replaced by interim directive 7710-2001-3 dated December 14, 2001, which streamlines and removes interim requirements for entering inventoried roadless areas and clarifies local decision makers' discretion for roads analysis. All road management activities for this project comply with current interim direction.

Forest stands in the analysis area are located on gently sloping ridgetops and steeper sideslopes at elevations ranging from 3,800 feet to 5,600 feet. Stand composition varies with aspect and slope. Southerly facing slopes contain predominantly Douglas fir plant communities. Northerly facing slopes, ridgetops, and riparian areas are comprised of grand fir communities. Subalpine fir communities exist on northerly facing slopes at, and above 5,200 feet. Average precipitation for the area is 35–45 inches per year, occurring mostly as snow during the winter months. Summers are typically hot and dry with occasional intense thunderstorm activity.

Portions of areas proposed for treatment in this project have been previously treated. In many instances (especially on flat ground) a variety of silvicultural treatments occurred on the same acres in different years. Previous treatments included: pre-commercial thinning; commercial thinning; partial cuts; clearcuts; and shelterwood prescriptions. Tractor logging was used on gently sloping ridgetops, while cable and skyline yarding were used on steeper slopes.

PURPOSE AND NEED FOR ACTION

Findings from the Asotin Watershed Assessment indicate that past management practices of fire suppression, selective harvest, encroachment of shade tolerant species, and past drought conditions have contributed to the degradation of forest ecosystem sustainability in the watershed. These past practices and conditions have transformed stand structure, tree species composition, and tree stocking levels of stands in the watershed to non-historic levels, and have contributed to increased fuel loading.

Restoration of the watershed to healthier and sustainable conditions was identified as a need for the Upper Charley analysis area. My proposed action consists of a variety of activities that will help to restore the area.

Specifically, we are proposing to meet the need for healthier and more sustainable conditions in the watershed by:

1. Reducing tree stocking densities and beginning the reestablishment of vegetative composition to those more similar to their historic range (100 years before present conditions) to promote the sustainability and vitality of current and future stands, and be consistent with long-term disturbance processes.

2. Reestablishing fire as an ecological process across the landscape, reducing fuel accumulations to help reduce potential catastrophic wildfire, enhancing wildlife habitat, and begin restoring warm/dry forests.

3. Reducing overland sediment flow by obliterating roads no longer used or needed, reducing overall road density, planting native grasses, and improving the hydrologic function of existing system roads.

4. Implementing water quality, fish habitat, wildlife, and recreation restoration/enhancement projects that will contribute to ecosystem sustainability of the watershed.

5. Providing economic and quality of life opportunities for the local population consistent with the Forest Plan.

ENVIRONMENTAL IMPACT STATEMENT

I have determined the proposed actions and resulting effects could best be analyzed and disclosed to the public through an environmental impact statement (EIS). A Notice of Intent to prepare an EIS was published in the *Federal Register* on August 25, 1998. This was followed by release of the Upper Charley Subwatershed Ecosystem Draft Environmental Impact Statement (DEIS) the week of April 21, 2000. The Notice of Availability for comment on the DEIS was published April 28, 2000.

CONSULTATION WITH TRIBES

Consultation with the Nez Perce Tribe occurred prior to my decision. Meetings with tribal representatives took place March 23, 1999 and January 21, 2000, to discuss Upper Charley Subwatershed Ecosystem Restoration Projects. Locally, the Upper Charley analysis area lies within the area ceded to the United States government by the Nez Perce Indians as a result of the Treaty of 1855. The Treaty was subsequently ratified by Congress and proclaimed by the President in 1859. As a result of the treaty, elements of Nez Perce culture, such as tribal welfare, land, and resources were entrusted to the United States government.

Specific Nez Perce treaty rights applicable to the land base managed by the Umatilla National Forest are generally articulated in Article III of the 1855 Treaty and include:

The exclusive right of taking fish in all streams where running through or bordering said reservation is further secured to said Indians; as also the right of taking fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land."

My decision is guided by the federal government's treaty responsibility to the Nez Perce. As treaties are the law of the land, the Forest Service has an obligation to manage National Forest resources in a manner that harmonizes the Federal trust responsibility to tribes and the statutory mission of the agency.

PUBLIC PARTICIPATION

The NEPA scoping process (40 CFR 1501.7) was used to invite public participation to refine the scope of this project, and to identify preliminary issues to be addressed. The Forest Service sought information, comments, and assistance from Federal, State, and local agencies, the tribes, and other groups and individuals interested in, or affected by, the Proposed Action. The scoping period lasted 30 days. The public was provided numerous opportunities to participate in the Upper Charley Subwatershed Ecosystem Restoration Project. For additional discussion and details, see the EIS, Chapter I page 12.

A DEIS was distributed for comments. The comment period lasted 45 days. In response to the DEIS, ten letters were received. Copies of the letters, our responses to the comments, and errata sheets are circulated along with this document.

ISSUES

Four key issues were identified by the public and the Forest Service interdisciplinary team in response to the proposed action. Key issues were then used to develop alternatives to the Proposed Action. Key issues include:

- **Ecosystem sustainability:** Ecosystem sustainability refers to the condition of the forest, based on the landscape potential, existing flora and fauna, and how the potential is maintained over time and space. Resource specialists on the interdisciplinary team identified that past management practices of fire exclusion, and timber harvest has altered successional patterns and created "unnatural" forest stands and forest conditions in the Upper Charley analysis area. Forest stands are experiencing mortality in the intermediate and suppressed age classes due to competition for growing space, water, and nutrients. Fire exclusion has permitted the ingrowth of later seral species and has resulted in the domination of dense forest stands by shade-tolerant species.

- **Big game habitat:** There is controversy among forest users whether management activities such as planned timber harvest, prescribed burning, and road closures help sustain big game habitat. Some believe implementing timber harvest, prescribed burning, and having too many open roads adversely affects big game habitat.

- **Water quality and fish habitat:** Water quality and fish habitat are key resources in maintaining ecosystem sustainability and contributing to watershed restoration. The interdisciplinary team acknowledged that water quality and fish habitat would be key issues for this analysis. Forest management activities may affect water quality, quantity, and time of flows through alteration of soil, site characteristics, and other conditions (Forest Plan FEIS IV-17).

- **Road Management:** Road management, consisting of road construction and reconstruction, road obliteration, and road closures may affect multiple forest resources such as, timber harvest, big game, fish habitat, water quality, and recreation. Concerns ranged from too many roads, to not enough roads available for access in the area.

ALTERNATIVES CONSIDERED

Four action alternatives and a no action alternative were analyzed in detail in the EIS. They are identified as Alternatives A, B, C, D, and E. Two additional alternatives (Alternatives F and G) were also analyzed, but dropped from detailed consideration in the EIS. Alternative F would manage the area using even-aged harvest prescriptions, where possible, because it is easier to accomplish this type of harvest and it is more economically favorable. This alternative was dropped from further analysis because even-aged harvesting would lessen average tree age and size diversity over a larger area and could increase overland sediment flow and erosion. Based on past treatments and exiting conditions even-aged management would not meet the purpose and need of the proposed action. Alternative G, which was also dropped from detailed analysis, would use prescribed fire only within harvest units, and not on a landscape basis. This alternative was dropped, because it would not meet our identified needs to establish fire as an ecological process across the landscape, reduce fuel accumulations, or reduce the risk of a large high-intensity wildfire.

For additional information on alternatives, please see Chapter II of the EIS. A Summary of Specific Features for each action alternative considered in detail is included in Appendix A of this document.

Alternative A – No Action

The “no action” alternative is required by NEPA. In this document the “no action “ alternative means the proposed project (which includes all activities identified in the proposed action) would not take place in the Upper Charley analysis area at this time. Alternative A is designed to represent the existing condition. It serves as a baseline to compare and describe the differences and effects between taking no action, and implementing action alternatives.

If Alternative A was selected, current management activities taking place in the area would continue, but no new activities would occur. Only those management activities considered part of normal maintenance requirements, or those allowed under previous decision documents would continue. Activities such as, motorized access travel management, road maintenance, dispersed recreation, noxious weed management, fire protection, and livestock grazing would be allowed to continue as they currently take place in the project area.

Alternative B – Proposed Action - Preferred Alternative

Alternative B is the proposed action identified in scoping, and the preferred alternative identified in the DEIS. Alternative B is designed to reduce the risks affecting ecosystem sustainability and begin restoring the watershed to healthy and sustainable conditions. Findings from recent scientific studies (*Restoring Ecosystems in the Blue Mountains, D. Caraher et al 1992,Search for a Solution – Sustaining the Land, People, and Economy of the Blue Mountains, R. Jaindl and T. Quigley editors, 1996)* indicate the need for ecosystem management on a landscape basis. The design of Alternative B began with the awareness of past management practices of timber and fire exclusion. Timber harvest, in particular, has fragmented the forest into small areas of management. The intent of Alternative B is to focus on the management of multiple resources on a larger landscape area, balancing the ecological and socioeconomic aspects of the Forest Service mission statement "to care for the land and serve the people." In the past, we have implemented management activities on a smaller scale for a single resource resulting in multiple reentries into an area.

Commercial harvest of timber is incorporated in Alternative B to provide economic opportunities for local and regional economies, and to help provide funding for recommended restoration projects. Alternative B proposes to harvest approximately 18.9 mmbf of timber (35,790 cubic feet) over a total of 3,566 acres. Alternative B would accommodate silvicultural needs required by existing forest stands. This would enable us to "rest" the area from any repeat ground disturbing activity for a longer period of time (more than 20 years) than had previously occurred with past management. Regular maintenance activity would still occur. No timber harvest is proposed in PACFISH buffered riparian areas.

Prescribed fire treatments are proposed on a landscape basis. They would occur within harvest units and in areas of no timber harvest. Prescribed fire objectives for the Upper Charley analysis area are to: (1) treat overstocked stands to begin the change to long-term desired stocking levels; (2) begin to change species composition to reflect a majority of fire and pest resistant trees; (3) create naturally shaped openings; (4) create a mosaic of burned and unburned patches; (5) reduce on the ground fuel accumulations and begin to reduce ladder fuels; (6) maintain and promote effective ground cover; and (7) increase area coverage of desired grasses, shrubs, and forbs.

Road reconstruction is proposed for Lick Creek Road 41, Iron Spring Road 42, Charley Creek Road 4206, Road 4200130, and Road 4206100. Most of the road reconstruction (18.10 miles) consists of road resurfacing and removing degrading ditch relief culverts and replacing them with armored rolling drain dips.

Alternative B would obliterate approximately 22.04 miles of non-system roads (a non-system road is defined as "*any continuous set of wheel tracks, which exist for more than one season, and do not belong to the transportation system*"). Most non-system roads would be obliterated by mechanical means. In most cut and fill situations, the fill material would be retrieved and the roadway would be recontoured to as close to its natural form as possible. On flat terrain, or where simple wheel tracks exist, roads would be scarified and camouflaged with naturally occurring items such as woody debris or rocks. As a minimum, all areas where the soil is disturbed during this process would be revegetated with native grass seed. If native seed is not available, an alternative seed mixture may be substituted. A very small percentage of non-system roads identified for obliteration is producing adequate cover vegetation and would be categorized as "obliterated by natural processes."

Approximately 0.63 miles of system roads, no longer needed for resource management, would also be obliterated (0.35 miles of Road 4200032, and 0.28 miles of Road 4200043).

Approximately 5.23 miles of temporary road access would be constructed in order to access some areas where prescribed burning or timber harvest would occur. Subsequent to management use, they would be obliterated.

Alternative B would implement a variety of restoration/enhancement projects recommended in the Asotin Watershed Assessment, and by ID Team resource specialists for the Upper Charley subwatershed. These projects include: instream restoration projects (log weirs, riprap, boulders), cisterns for grouse and turkeys, reconstruction of ponds, restoring two acres of aspen stands, enhancement of a dispersed campground, placement of bat boxes, and planting native hardwoods, shrubs, forbs and grasses.

Alternative C - Big Game Habitat

Alternative C focuses on enhancing and improving big game habitat in the Upper Charley analysis area. Alternative C is designed to optimize the ratio of forage area to cover area, the quality of cover present, and the spatial arrangement of forage areas and total cover. It has been shown that elk are strongly oriented to using "edge" or interface between forage and cover. Based on the publication *Wildlife Habitats in Managed Forests of the Blue Mountains of Oregon and Washington,* USDA Agriculture Handbook No. 553. 1979, the zone of highest elk use is within 600 feet of this edge between forage area and total cover. Alternative C is designed to eliminate forage deficient areas (areas defined as any total cover farther away than 600 feet from the identified forage:cover edge) by optimizing all forage and cover areas with a 600-foot distance between areas.

In Alternative C, the arrangement of harvest units and selection of silvicultural prescriptions are intended to eliminate forage deficient areas. Alternative C would harvest approximately 11.5 mmbf of timber (21,569 cubic feet) over a total of 1,905 acres.

Proposed road obliteration and reconstruction activities area similar to Alternative B, with the exception of an additional seasonal road closure of 4.44 miles, and a year-round closure on road 4206100 and its tributaries. These closures would offer added protection to elk from vehicular disturbances.

Prescribed fire treatments are designed to manage fuel accumulations and reestablish fire as an ecological process across the landscape. Fire treatments, in areas where no prior harvest would take place, are designed to maintain total cover conditions as much as possible, and still meet fuel reduction objectives.

Alternative C proposes to implement recommended restoration projects to enhance water quality, fish habitat, recreation, and wildlife, and would commercially harvest timber. They are the same restoration/enhancement projects as identified in Alternative B.

Alternative D – Restoration without Commercial Timber Harvest

Several interested organizations (Blue Mountain Biodiversity Project, The Lands Council, Forest Watch, etc.) advocate ending commercial logging on National Forest lands. They believe that it is possible to implement watershed restoration and improve the health of forests without any commercial timber harvest. Letters received during the scoping period requested the Pomeroy Ranger District include an alternative in the analysis that would focus entirely on restoration and enhancement excluding commercial timber harvest. Alternative D was designed to respond to this request.

In Alternative D, pre-commercial thinning and prescribed fire treatments would be used to meet the following objectives: (1) ensure long term forest health and ecosystem sustainability, and (2) manage fuel accumulations to help control wildfires and reestablish fire as an ecological process across the landscape. Prescribed fire treatments, some of which include non-commercial mechanical treatments, would be used to begin changing overstocked stands to long-term desired stocking levels, and begin the process of changing tree species composition to reflect a majority of fire and pest resistant trees.

Reduction of road densities and overland sediment flow would be accomplished with obliteration of non-system and system roads. Road reconstruction projects to remove and replace degraded culverts, and improve road surface conditions would also take place. Temporary roads would still need to be constructed to access prescribed fire areas, and would be obliterated subsequent to management use.

Alternative D would implement the same restoration/enhancement projects listed in Alternative B for water quality, fish habitat, recreation, and wildlife.

Timber sale receipts would not be available to help pay for restoration activities, all costs would be obtained from appropriated funds, or from other funding sources.

Alternative E – Management Activities included in Class IV RHCAs

Alternative E is designed to respond to the need for restoring ecosystem sustainability on a larger scale than has been done in the past. It is similar to Alternative B, except timber and prescribed fire activities are proposed on 133 acres within Class IV Riparian Habitat Conservation Areas (RHCAs). Class IV Streams are defined as *seasonally flowing or intermittent streams*, with a non-management buffer of 100 feet slope distance from each side of the stream.

Riparian areas have the potential of growing large quantities of vegetation quickly, and the ability to accumulate large quantities of fuel materials, thereby posing a greater risk of catastrophic damage to riparian areas, and a greater fire hazard risk to the subwatershed. Past wildfire activity in RHCAs revealed how damaging wildfire has been to these areas due to high fuel concentrations. The ID Team wanted to review and analyze the effects of incorporating commercial timber harvest and fire management activities in the Class IV RHCAs in the Upper Charley subwatershed.

Alternative E is designed to incorporate the Asotin Watershed Assessment's recommendation of modifying RHCAs and managing the outer 50% of RHCAs to meet other resource objectives given the following conditions:

- Stream shading would not be reduced
- Large woody debris frequencies would be above Riparian Management Objectives (RMOs)
- Only single tree removal would be allowed
- No ground based harvest equipment would be allowed within the RHCA

Alternative E would harvest approximately 19.4 mmbf of timber (36,813 cubic feet) over a total of 3,699 acres.

Alternative E would implement the same restoration/enhancement projects listed in Alternative B for water quality, fish habitat, recreation, and wildlife.

Prescribed fire and fuel treatments are designed to reduce the risks of catastrophic fire, reestablish fire as an ecological process across the landscape, and begin the change in species composition to reflect a majority of fire and pest resistant trees.

Road management projects to reduce road densities and reduce sediment flow are the same as Alternative B.

DECISION

After reviewing comments received from the public during scoping, and comments received after the DEIS review regarding big game Satisfactory Cover, I asked the Wildlife Zone Biologist to recommend adjustments to Alternative B. I asked that he propose adjustments that will ensure Forest Plan standards for Satisfactory Cover are met and to promote favorable spacing of residual cover. I wanted to protect, and where possible enhance elk habitat, as well as implement long-term vegetation enhancement through mechanical and prescribed fire treatments on a landscape basis. I felt it was important to promote ecosystem sustainability in the area by reducing tree-stocking densities in overstocked stands that are currently at low vigor and at risk of insect and disease infestation. Acting on the Wildlife Biologist's recommendation, I have decided with this decision document to defer harvesting and implementing prescribed fire treatments on approximately 385 acres of forest stands containing Satisfactory Cover. This acreage encompasses 16 full and 3 partial harvest/prescribed fire units. Please see Appendix B of this document for a list of units that are not included in this decision.

During the analysis of the Upper Charley project the U.S. Fish and Wildlife Service (USF&WS) listed Canada lynx as threatened under the Endangered Species Act. The final rule was published in the Federal Register in March 2000, and became effective on April 24, 2000. The Forest Service has signed a Lynx Conservation Assessment Strategy with the USF&WS. In September 2000, the Umatilla National Forest submitted to the USF&WS a programmatic Biological Assessment of Proposed Projects for the Umatilla National Forest On the Canada Lynx. The Upper Charley Subwatershed Ecosystem Restoration Projects were included in the Forest's programmatic Biological Assessment. On February 20, 2001, the USF&WS issued a Biological Opinion on the proposed projects. The Upper Charley analysis area is part of the Asotin Lynx Analysis Unit (LAU).

In the Upper Charley analysis area, there are 22 units (approximately 464 acres) of harvest/prescribed fire units located in designated lynx habitat. To meet the requirements outlined in the Lynx Conservation Assessment Strategy, I asked the Wildlife Zone Biologist to incorporate the Project Design Criteria established by the Umatilla and submitted in the Biological Assessment to Alternative B. With the changes in place Alternative B, as modified, was determined to "May Affect, Not Likely to Adversely Affect" Canada Lynx. Please see Appendix C for a description of how proposed project activities with modifications to Alternative B comply with project design Criteria I and Criteria II elements. A District Biological Assessment of Upper Charley Ecosystem Restoration Projects on North American Lynx Habitat is located in the analysis file.

The analysis of lynx habitat is an ongoing process, and will continue to develop as studies are completed and information becomes available. For purposes of this analysis, the Umatilla National Forest Lynx map dated March 1, 2001 was used to delineate lynx habitat and designate Lynx Analysis Units (LAUs). Any changes or new information regarding lynx habitat during implementation of this project will be reviewed.

After discussions with the Forest and District Fish Biologists and National Marine Fisheries Service (NMFS) personnel, I decided to make to some adjustments to restoration projects identified in Alternative B to ensure that we avoid, minimize, or otherwise offset any potential adverse effects to channel stability in RHCAs. The adjustments are as follows:

- There will be no in-stream placement of log weirs in areas lacking sufficient pool habitat, and there will be no entry of machinery in the stream. Boulders will be placed to add channel complexity to areas affected by the 1996, 100-year flood event. The use of boulders is intended to increase "pocket" pool habitat, trap and retain natural inputs of woody debris, and increase cover and resting areas for fish. Boulder or boulder placements will be keyed into the bank or streambed approximately every 4-6 bank full widths (every 40-60 feet) downstream. Clusters will be placed between high and low watermarks in straight riffles. Single boulders will be placed at low-flow stream margins on outer bends of the channel. All work and equipment will be outside of the wetted channel.

- Logs will be moved from a higher floodplain terrace to slightly above and parallel to the bankfull channel at the bases of unstable slopes. Large wood will be drawn from existing downed wood on older higher stream terraces on the west side of the channel. These techniques will increase slope stability and reduce sediment inputs to the channel from surface erosion on slopes above the channel. All disturbed ground will be revegetated.

- Riprap placement will be limited to approximately 30 feet in the area of Charley Creek immediately adjacent to Road 4206 where the stream is in danger of undercutting the road. Moving this section of road is not feasible. Riprap placed in this area will protect the road against further erosion, increase bank stability, and reduce sediment loading associated with unstable stream banks in this section. All work and equipment will be outside of the wetted channel.

- Road reconstruction will occur on approximately 11.5 miles of roads in the analysis area. This includes 8.36 miles for Lick Creek Road 41, and approximately three miles of Roads 42, 4206130 and 4206100. Work will include resurfacing and the replacement of ditch relief culverts with armored drain dips. Approximately 200 feet of cutslopes along road 4206 will be stabilized with a combination of rock collars, recontouring, erosion control matting and reestablishment of vegetation. An additional two miles of cutslopes along Road 4206 within the RHCA will be stabilized by seeding and planting.

More information on project descriptions of site-specific water quality and fish habitat projects can be found in the Biological Assessment for Aquatic Species located in the analysis file.

With these adjustments in mind, I am selecting Alternative B with specific modifications, hereafter referred to as Alternative B-Modified, or the Selected Action.

Following is a summary of the modifications to Alternative B:

- Defer, in this decision, harvesting and burning on approximately 385 acres of Satisfactory Cover thereby:
  - Increasing the level of Satisfactory Cover remaining in the Upper Charley area
  - Allowing for better distribution of Satisfactory Cover throughout the Upper Charley area
  - Locating Satisfactory Cover in areas bordering RHCAs which are more favorable to elk
  - Locating Satisfactory Cover in areas bordering other Satisfactory Cover units to increase the amount of cover available in stands

- In areas of delineated lynx habitat:
  - There will be no pre-commercial thinning.
  - Silvicultural prescriptions will be designed to provide for the development of future snowshoe hare habitat
  - Where possible, units adjacent to existing forage will have piles of loosely jackstrawed downed and/or cull logs grapple piled and not burned in order to provide for the development of future denning habitat.
  - Slash treatment will be limited to jackpot burning.

- Projects affecting water quality and fish habitat projects will incorporate the following adjustments:
  - There will be no in-stream placement of log weirs to increase pool habitat.
  - Boulder placements will be used to increase "pocket" pools.
  - All work and equipment will be outside of the wetted channel.
  - All disturbed ground will be revegetated.
  - Approximately 30 feet of riprap will be placed adjacent to Charley Creek and Road 4206 to prevent the loss of this section of road. Riprap will not be placed in any other area.
  - Road reconstruction to Roads 42, 4206130, and 4206100 will be limited to approximately three miles in areas located on high slopes.

During the decision process for this project, I realized that I would not be able to fully satisfy all public concerns, as many of them are mutually exclusive. I have selected activities that are ecologically sound, for both the short and long-term. I believe the decision I made reflects sensitivity to all the conflicting public concerns. I considered and balanced numerous factors in making my decision.

The adjustments I have selected in Alternative B-Modified respond to big game Satisfactory Cover availability and distribution, and meet Forest Plan standards and guidelines. The adjustments chosen in areas of delineated lynx habitat will protect lynx habitat as addressed in the Canada Lynx Conservation Assessment and Strategy, and comply with the Biological Assessment of Proposed Projects for the Umatilla National Forest on Canadian Lynx, and subsequent USFW&S Biological Opinion. The adjustments I have made to projects affecting water quality and fish habitat are documented in a letter of concurrence from National Marine Fisheries Service. Our consultation with NMFS under the Endangered Species Act, also meets our requirements for consultation under the Magnuson Stevens Fishery Conservation Management Act (MSA).

DECISION TO REISSUE DRAFT EIS AS FINAL DOCUMENT

I am using Alternative B as the primary point of reference for this summary discussion of the effects of the Selected Action. I have reviewed the modifications to Alternative B and have determined that the changes are within the scope and context of the environmental effects disclosed in the DEIS and supporting documents. I have reviewed the pertinent regulations in determining whether to prepare a Final Environmental Impact Statement found in 40 CFR 1503.4 (a-c). I have assessed and considered comments both individually and collectively and have responded to these comments in the final documentation of the EIS. Factual corrections have been included in the Errata. Although I have titled the Selected Action Alternative B-Modified, I do not consider it truly a new or modified alternative as referenced in 40 CFR 1503.4 (a) (1 and 2). I also do not consider any of the items listed in the Errata to be a supplement, improvement, or modification of any analysis [40 CFR 1503.4 (a) (3)].

The directives to reduce paperwork in 40 CFR 1500.4 (m) recommends "attaching and circulating only changes to the draft environmental impact statement, rather than rewriting and circulating the entire statement when changes are minor."

Comments received on the Draft EIS did not disclose any new issues or a need for substantial new analysis. We received ten letters after a 45-day review of the Upper Charley DEIS. One letter was supportive of the preferred alternative (Alternative B), and a letter from The Department of Interior informed us they had no comments on the DEIS. The remaining eight letters contained comments on a variety of concerns.

Concerns about the effects of prescribed fire activities on air quality, the loss of big game Satisfactory Cover, effects to water quality/fish habitat, effects to lynx habitat, and prevention of noxious weeds were addressed in several letters. In the DEIS we discussed how air quality will be the limiting factor in determining how many acres will be burned each day. The number of acres and fuel type burned will be dependent on meeting air quality standards. The Washington Department of Natural Resources is the governing agency for air quality in Washington. The Pomeroy Ranger District is in constant contact with their meteorologist who determines if prescribed burning projects will meet Washington State smoke management guidelines using current and predicted air quality conditions and current forecasted weather conditions (EIS IV-17). The WSDNR has the authority to stop any and all burning activities if conditions are not appropriate. I addressed concerns and comments on big game Satisfactory Cover in this ROD by deciding to defer harvesting and prescribed fire activities on 385 acres of Satisfactory Cover. I have incorporated comments and concerns about water quality/fish and lynx habitat in the modifications made to Alternative B. Control and prevention of noxious weeds is addressed in the DEIS (Chapter II-page 33). Other comments on road management, roadless areas, soil protection, snag retention, and species viability concerns are addressed in the DEIS and did not require new analysis. As time has elapsed between the Draft EIS and ROD, new tools have been recommended to track natural resource issues. Examples of additional informational reports added to the project file include summary statements for soils and roads.

Based on the previous discussion, current NEPA policy and direction, and other pertinent information, it is my belief that any modification to Alternative B (proposed action) will be insignificant and result in less effect to all natural resource issues considered, or any management activity proposed. In addition, after reviewing the comments to the Upper Charley DEIS, it is also my belief that all comments and public concerns have been adequately addressed and effects disclosed.

Therefore, I have determined that it is sufficient and appropriate to re-issue the Draft EIS with the public's comments, our response to comments, and Errata sheets as the final documentation for the Upper

Charley Subwatershed Ecosystem Restoration Projects (copies are included with the distribution of this ROD). The entire document with a new cover sheet will be filed as the final statement [40 CFR 1503.4 (c) and 1506.9].

DECISION SUMMARY

Maps and a table of specific features for Alternative B-Modified are located in Appendix D of this document. The following information summarizes the various management practices I have selected for Alternative B-Modified.

1. Prescribed burning activities

Within timber harvest units, approximately 3,093 acres will be burned. In addition to the burning of slash following timber harvest, I have decided to burn 1,757 acres of understory vegetation and smaller trees to improve shrub and forb production for big games species, reduce the potential for large, high-intensity stand-replacing fires, and promote a healthy forest that is less susceptible to insects and disease. Various site-specific fire prescriptions will be used throughout the entire analysis area. Burn prescriptions in defined lynx habitat will be designed to maintain, regenerate, or create snowshoe hare habitat. Some cutting of small trees to improve burning conditions will be permitted. Each prescribed fire unit will have an approved burn plan with an associated review by all resource area managers to assure objectives and methods are in compliance with the Upper Charley EIS.

2. **Commercial and non-commercial timber removal, types of silvicultural treatments, and road reconstruction including temporary road construction necessary to provide access and achieve other resource objectives.**

Alternative B-Modified will harvest trees on approximately 3,181 acres. An estimated 13.9 MMBF of timber products will be harvested. Following is a listing of silvicultural prescriptions and logging systems that will be used:

- Thinning from Below ----------717 acres
- Shelterwood Group Selection------362 acres
- Uneven-aged Management ------2,102 acres
- Pre-commercial Thinning---------765 acres

- Helicopter logging----------682 acres
- Skyline logging----------976 acres
- Tractor logging----------1,523 acres

In areas of delineated lynx habitat, harvest units with a shelterwood group selection prescription will retain, where possible, healthy sub-alpine fir, Engelmann spruce and grand fir overstory trees to serve as a future seed source for understory development. The largest and healthiest trees will be retained, as well as groups of trees of all sizes of the most pathogen resistant species present. Where there are limited numbers of fir and spruce in the overstory, western larch will be left. Both thinning from below and uneven-aged management prescriptions will be designed to provide for the development of future snowshoe hare habitat. Thinning from below will reduce stand stocking, and clumps of existing seedling and saplings will be retained to provide for screening and stand diversity. Uneven-aged management will

retain large healthy individual trees, as well as groups of all size classes, throughout each unit with a preference for retention of healthy sub-alpine fir, Engelmann spruce, and grand fir

Alternative B-Modified will implement PACFISH direction as incorporated in the amended Forest Plan. It will incorporate established riparian buffer widths that follow PACFISH direction for Riparian Habitat Conservation Areas (RHCAs). All proposed harvest activity is located outside RHCAs.

Approximately 5.23 miles of temporary road will be constructed to facilitate timber removal and entry for prescribed burning, and will be obliterated subsequent to use. Approximately 11.5 miles (this includes 8.36 miles of Lick Creek Road 41, and approximately three miles of roads 42, 4206130, and 4206100) will be reconstructed. Reconstruction work will consist mainly of removing and replacing degraded ditch culverts, stabilizing road surfaces, and stabilizing road cut-slopes.

Alternative B-Modified reduces the volume of timber that will be available for sale relative to Alternative B. Alternative B-Modified results in a movement toward the Forest Management Goal of "providing land and resource management that achieves a more healthy and productive forest and assists in supplying lands, resources, uses, and values which met local, regional, and national social and economic needs."

In Alternative B-Modified, receipts from the competitive bidding processes relating to commercial timber offerings will provide guaranteed funding for essential reforestation activities under the Knudsen-Vandenburg Act (K-V). Funding available after implementing essential K-V reforestation activities will be allocated to the Salvage Sale Fund. Remaining funds after these allocations will then finance other restoration projects identified in the alternative.

3. **Watershed restoration/enhancement projects (including road obliteration) that will promote ecosystem sustainability.**

Approximately 22.67 miles of road will be obliterated. Most roads will be obliterated by mechanical means. The method of obliteration will depend on the characteristics of the road. In most cut and fill situations fill material will be retrieved and the roadway will be recontoured to as close to its natural form as possible. On flat terrain, or where simple wheel tracks exist, roads will be scarified and camouflaged with naturally occurring items, such as woody debris and rocks. At a minimum, all areas where soil has been disturbed will be revegetated with native grass seed (if available) or an alternative mixture.

Other restoration/enhancement projects include: boulder placements; placement of approximately 30 feet of riprap along Charley Creek adjacent to Road 4206; construction of grouse/turkey cisterns; aspen habitat restoration; dispersed campground development; placement of bat boxes; control and prevention of noxious weeds; planting native hardwoods, shrubs, and grasses; and enlargement and removal of sediment from six existing created upland stock ponds needed to encourage cattle to stay on ridgetops and out of stream bottoms.

4. **Project monitoring and management requirements needed to assure that design criteria and management practices are implemented effectively.**

Alternative B-Modified will implement the mitigation, management requirements, and project monitoring listed in the EIS on pages II-31-36, and site-specific Best Management Practices identified in Appendix B of the EIS. We will also incorporate additional fish/water quality monitoring elements that are listed in Appendix E of this document. Following is a summary of the additional monitoring elements:

- Turbidity will be monitored in Charley Creek during harvest and road reconstruction activity. Data collection will continue for at least one year after project activity completion.

- Turbidity will be monitored above and below instream project activities during implementation.

- While doing implementation and effectiveness monitoring, if a detection of increased turbidity of 5 NTU's above background is measured, an investigation will be implemented to identify the source. Upon discovery of the source, immediate action will be taken to correct the increase in sediment transport.

- Baseline water temperature monitoring will continue.

- Wolman Pebble Counts will be used to monitor substrate composition, including surface fines, at established locations in the representative reach on a yearly basis.

- Fish habitat data will continue to be collected in the portion of the representative reach which will undergo instream habitat improvements on a yearly basis during the contract period of any vegetative removing activity (i.e. commercial timber sale).

- A new representative reach upstream of the established representative reach will be set-up the same year that installation of instream boulders begins in the established representative reach.

- Pre-project photo monitoring will be conducted at instream project sites prior to implementation. Post-project photo monitoring at instream projects will be conducted annually for three years, and periodically thereafter.

RATIONALE FOR THE DECISION

My decision for this document is based upon two principal criteria:

- **Consistency with Forest Plan (as amended) goals, objectives, and standards.** The Forest Plan and the process used to develop it represents agreements on the management and uses of the Umatilla National Forest among a wide variety of publics, agencies, Indian tribes, organizations, and individuals. It is a negotiated understanding with the public. I have utilized the basic components of the Forest Plan to guide this analysis toward achieving those outcomes described as desired future conditions.

- **The relationship of the alternatives to environmental key issues.** Individual members of the public and representatives of organizations submitted comments during scoping that were used to develop key issues associated with this project. As a result, I looked at how environmental issues were addressed in each alternative. Based upon that information I asked the interdisciplinary team to analyze each alternative relative to each key issue.

Consistency with Forest Plan Goals, Objectives, and Standards

The need for action and desired conditions for the Upper Charley analysis area are based on Forest Plan goals, objectives, and standards. With the exception of Alternative A (No Action), implementation of each action alternatives would result in "movement" toward desired future conditions described in the Forest Plan. All action alternatives respond in various ways to the need for restoration by contributing to reducing tree stocking densities and beginning the reestablishment of vegetative composition to those more similar to their historic range, reducing fuel accumulations to help control potential catastrophic wildfire, reestablishing fire as an ecological process across the landscape, reducing overland sediment flow, obliterating roads no longer needed, reducing overall road density, improving hydrologic functions of existing system roads, incorporating watershed restoration and enhancement projects, and providing economic and quality of life opportunities for the local population.

I evaluated all of the alternatives analyzed in detail to determine how they responded to the needs identified in the Purpose of and Need for Action section of Chapter I in the EIS, since they were developed with Forest Plan goals, objectives, standards, and desired future conditions in mind.

1. **Reducing tree stocking densities and beginning the reestablishment of vegetative composition to those more similar to their historic range to promote the sustainability and vitality of current and future stands, and be consistent with long-term disturbance processes.**

Alternatives B-Modified, C, D, and E would reduce tree stocking densities in varying amounts. Alternative B-Modified will commercially treat 3,181 acres of overstocked stands, Alternative C would commercially treat 1,905 acres, Alternative D would commercially treat 0 acres, and Alternative E would commercially treat 3,699 acres. Action alternatives, C, D, and E would pre-commercially thin 938 acres. Alternative B-Modified reduces the number of acres pre-commercially thinned to 765, because no pre-commercial thinning will take place within delineated lynx habitat.

Trees within treated forest stands will have improved growth and vigor. They will be more resistant to insects, disease, and wildfire and contribute to a more stable and sustainable ecosystem. Alternatives B-Modified, C, and E that include timber removal prior to prescribed fire will improve stand health at a faster rate than using only prescribed fire. Areas which have understory trees mechanically removed prior to prescribed burning can reach desired stand structure and fuel profiles in fewer entries and in a shorter time period with a greater success of retaining quality overstory structure.

Mechanically removing standing fuels prior to burning enhances our ability to determine which trees, both understory and overstory will be removed or remain in forest stands. Mechanical treatments will be used to protect large overstory trees and healthy young trees in timber stands, and it will increase substantially, the result we are looking for. All action alternatives propose to remove some fuels by mechanical thinning.

Alternatives B-Modified, C, and E would begin the reestablishment of vegetative composition to more historic ranges by incorporating timber harvest. Alternative B-Modified will harvest 1,373 acres in high-risk insect and disease-infected areas, and return 2,321 acres to historic seral species. Alternative C would harvest 953 acres in high-risk insect and disease-infected areas, and return 1,368 acres to historic seral species. Alternative E would harvest 1,819 acres in areas of high risk for insect and disease infestation, and if implemented would return 2,634 acres to historic seral species. Alternatives A and D would not return any acres to their historic seral species by means of timber harvest. Alternative D would only use non-commercial vegetative mechanical treatments and prescribed fire to move stands closer to

historic seral species. This would take a longer period of time to accomplish because more stand conversion prescribed fires would be needed on more acres to convert the stands to their historic structure. There would be more particulate emissions in the second and third prescribed fire entries proposed in Alternative D because of higher residual ground fuel loadings created from previous prescribed fire entries, and the potential for catastrophic effects would occur if ladder fuels and crowns carried the fire too fast and too hot. Alternative D would not make use of the commercial value of any timber mechanically removed.

Alternative B-Modified will move 340 acres of dry biophysical groups (ponderosa pine and Douglas fir) late/old multi-canopy structure to late/old single story structure and 122 acres of late/old multi-canopy moist biophysical group (grand fir) to late/old single story structure. Both of these biophysical groups are currently below or at historic levels of late/old single story structure. Alternative C would move fewer acres to late/old single story in each biophysical group, 95, and 66 acres, respectively**.**

Alternative A would not move any stands closer to their historic range by either timber removal or prescribed fire.

I selected Alternative B-Modified because it addresses the need to reduce tree stocking densities to improve the sustainability of remaining vegetation, and meets Forest Plan standards for Satisfactory Cover. Alternative B-Modified will also optimizes the distribution of remaining Satisfactory Cover in the analysis area. Alternative E would reduce more acres of overstocked trees, but does not meet Forest Plan standards for Satisfactory Cover, and does not address lynx habitat concerns. Alternative C focuses on enhancing big game habitat and best meets Forest Plan standards for Satisfactory Cover, but does not treat as many acres of overstocked stands as Alternative B- Modified. Alternative D would take need a longer time period to reestablish an historic range of vegetation in the analysis area, and does not make use of the commercial value of any timber removed.

2. Reestablishing fire as an ecological process across the landscape, reducing fuel accumulations to help control potential wildfire, enhancing wildlife habitat, and begin restoring warm/dry forests.

Surveys show the amount of down woody debris is higher in the Upper Charley analysis area than expected with a natural fire regime. Without treatment, ground fuels will continue to accumulate at an even higher rate as stress-induced mortality within forest stands increases. In the Upper Charley analysis area, higher than natural ground fuel loadings coupled with existing fir understory trees have created a condition that promotes crown fires rather than an underburning environment. This results in the potential for more severe and catastrophic fire effects on sites that naturally experienced a low-intensity fire regime.

Alternative A does nothing to address the need in the Upper Charley analysis area to reduce fuel loadings and restore fire as an ecological process, or begin restoring warm/dry forest stands.

Alternative B-Modified will manipulate vegetation to capture mortality and create healthier forest stands. It will use prescribed fire as an opportunity to reduce down fuels and break-up ladder fuels. Over the short and long-term, Alternative B-Modified will cumulatively reduce future potential risks for catastrophic wildfire. Alternative C would treat fewer acres than Alternative B-Modified with vegetative manipulation prior to prescribed fire, and Alternative E would treat the largest number of acres and, introduce fire into 133 acres of Class IV Riparian Habitat Conservation Areas. Sites which have understory trees mechanically removed prior to prescribed burning can reach desired stand structure and fuel profiles in fewer entries and in a shorter time period. Implementing Alternative B-Modified as

compared to Alternatives C will result in a smaller amount of ground fuel to consume in subsequent maintenance prescribed fires, and will result in less smoke emissions.

In Alternative D, 3,192 acres of fuels would be removed using non-commercial mechanical treatments followed by prescribed burning, incorporating four different fire prescriptions. Alternative D would treat 2,053 acres with prescribed fire and no mechanical pre-treatment. Prescribed burning without prior mechanical entry would reduce stand density by inducing mortality in some understory and overstory trees. Standing dead trees that remained after the first prescribed burn would fall over and eventually create new down woody fuel loads in only a few years. Most of the areas treated with prescribed fire only, would require additional prescribed fire entries beginning in as few as three years to continue reducing stand density and remove newly created ground fuels. Some areas would require yet additional prescribed fire entries in the following five to ten years before reaching desired stand structure and fuel profile. If mechanical treatment funds are unavailable, forest stands that require mechanical treatment prior to prescribed fire entry may not be treated at all. Forest stands may go untreated, because of the expense of mechanical fuel treatments and the inability to burn forest stands in their current fuel condition and stand structure without prior mechanical treatment.

I consider Alternative B-Modified to be a moderate plan as compared to Alternatives C and E in reducing fuel accumulations. Alternative B-Modified will not treat as many acres with prescribed fire as Alternative E, but will reestablish fire as an ecological process on a larger landscape area than Alternative C. I did not select Alternative D because of the extended length of time needed to accomplish fuel objectives, the uncertainty of funding for non-commercial mechanical fuel treatments, and higher risk of residual tree mortality. I believe Alternative B-Modified best meets the Forest Plan goal of executing a fire protection and fire use program that is cost efficient and responsive to land and resource management goals and objectives. Alternative B-Modified will provide the most diverse use of tools available by manipulating fuel components to achieve desired down-woody composition and structure.

3. Reducing overland sediment flow by obliterating roads no longer used or needed, reducing overall road density, and improving the hydrologic function of existing system roads.

The amount of roads on the landscape and open to public use affects various resources such as, water quality, wildlife, and recreation. In the Upper Charley analysis area, due to past management activity, system and non-system roads are excess to current needs. Most of these roads were constructed as temporary roads and were not obliterated after use.

Approximately 22.04 miles of non-system and 0.63 miles of system roads are proposed to be obliterated in all action alternatives. This will help to modify the road network in the Upper Charley area to a more manageable system. It will eliminate non-system and system roads no longer needed for resource management, and help reduce their contribution to overland sediment flow. My intent with this decision is to obliterate roads not needed, resulting in a much healthier watershed.

Reconstruction of roads is an important way to correct existing road problems. Alternatives D, and E propose to reconstruct approximately 18.10 miles of roads by improving surface conditions, replacing undersized and degrading culverts. Alternative C would reconstruct 13.66 miles and close 4.44 miles of road with a seasonal elk calving closure. With adjustments I am making in this decision, Alternative B-Modified will reconstruct approximately 11.5 miles of road. Reconstruction work proposed for Road 4206 will not take place in Alternative B-Modified. All road reconstruction activities are designed to improve the hydrologic function of the roads, as they currently exist.

Temporary road construction was proposed for all action alternatives with some differences in miles. Alternatives B-Modified and E proposed to construct 5.23 miles of temporary road for project access. Alternative D proposed 3.34 miles, and Alternative C proposed the least amount of temporary road construction of 1.70 miles. In all action alternatives including Alternative B-Modified, these temporary road segments are located on ridgetops, outside of RHCAs, and will be obliterated after use.

All action alternatives would reduce both open road density and overall road density (includes open, closed, system and non-system roads). Alternatives B-Modified, D, and E would reduce open road density from 2.17 miles/square mile to 2.12 miles/square mile, and Alternative C would reduce it to 1.57 miles/square mile. All action alternatives would reduce overall road density by 30% from 6.54 miles/square mile to 4.64 miles/square mile. All action alternatives would be working toward the Forest Plan desired condition of 2.0 miles/square mile of open road density. In Alternative B-Modified as well as Alternatives D and E, the 0.12 miles of the resulting road density of 2.12 miles/square mile equates to only 633 linear feet, which is very insignificant in terms of biological effects.

Overall, in determining the road systems for this area, I had to consider a variety of users (hunters, hikers, motorists, and forest service personnel, etc.). I wanted to maintain a road system that would protect aquatic habitat, and permit adequate access to the area in the future, both for resource management and for recreational enjoyment of the area. Basically what we are leaving open is main arterials. Although most secondary roads will be gated, this decision does not totally preclude future use. I believe that Alternative B-Modified will strike a balance in road access for a variety of forest users, and by reducing the number of miles of road reconstruction from 18.10 miles to 11.5 miles will continue to protect riparian habitat.

After reviewing Forest Service Interim Directive Number 7710-2001-3, Section 7712.13 (c) that replaced the February 12, 1999 interim direction, I have determined that a roads analysis was not needed. This new interim directive streamlines and removes interim requirements for entering inventoried roadless areas and clarifies local decision makers' discretion for roads analysis. My rationale for this decision includes the information that all temporary roads constructed will be for short-term use, are located on ridgetops and outside of RHCAs, and will be obliterated subsequent to use. Other proposed road reconstruction will not change the current use, increase or decrease access, and will not change the traffic patterns or road standards of roads to be reconstructed. Reconstruction work mainly consists of stabilizing road surfaces and cutslopes, and replacing undersized and degrading culverts. After road obliteration activities, all disturbed soil will be seeded and roads will be water barred. The activities associated with road obliteration will stabilize and revegetate bare, compacted soils, thereby, reducing the potential for recurrent sediment input into Charley Creek. The roads selected for obliteration meet Forest Service policy of decommissioning unnecessary roads. Road management activities as described in Alternative B-Modified were analyzed for this project by the District Engineer, and adhere to the transportation analysis documented in the Pomeroy Ranger District Motorized Access and Travel Management Plan, EA and DN dated July 19, 1993.

4. Implementing water quality, fish habitat, wildlife, and recreation restoration/enhancement projects that contribute to ecosystem sustainability of the watershed.

The Asotin Creek Watershed, which includes Charley Creek, is important aquatic habitat. It contains habitat for federally listed threatened spring/summer and fall Chinook salmon, Snake River steelhead, and bull trout. In addition to aquatic habitat, I determined that wildlife and recreation restoration projects should also be included for a complete ecosystem approach. Restoration and enhancement projects are included in all action alternatives. Alternatives B-Modified C, D, and E included the following enhancement projects:

- In-channel and stream restoration projects
- Placement of grouse/turkey cisterns
- Aspen habitat restoration
- Dispersed campground development
- Enlargement and sediment removal of six existing created stock ponds
- Placement of bat boxes
- Control and prevention of noxious weeds
- Planting of native hardwoods, shrub, forbs and grasses

Alternative B-Modified will incorporate adjustments to water quality and fish habitat projects. To protect fish habitat, restoration work will occur only during the working window of July 15 through August 15 (as approved by regulatory agencies). Log weirs will not be placed in Charley Creek. Boulders will be used to increase "pocket" pools within streams. Down woody debris and replacement material do not appear to be limiting factors, but actual pool structure in the creek could increase some opportunities for rearing habitat.

In Alternative B-Modified, approximately 30 feet of riprap will be placed adjacent to Charley Creek and Road 4206 in an area where the stream is in danger of undercutting the road and thereby increasing sediment into the channel. Heavy equipment will remain on the road during while placing the riprap. This is the only area identified in Alternative B-Modified for riprap placement.
The restoration/enhancement projects listed in the DEIS for the Upper Charley analysis area were the same for all action alternatives. After my discussions with Forest and District Fish Biologists and NMFS personnel, modifications to avoid, minimize, or otherwise offset any potential adverse effects to channel stability in RHCAs would have been incorporated in all alternatives considered.

5. **Providing economic and quality of life opportunities for the local population consistent with the Forest Plan.**

The Forest Plan states the economic well being and lifestyles of people in the 10 county area of the Umatilla National Forest are affected by products and services from the Forest.

Alternatives B-Modified, C, and E would provide timber products in varying amounts to support local communities and regional economies. Alternative E would provide the most timber. Alternative B-Modified will provide a level between Alternative B and C. Alternatives B-Modified, C, and E utilize the commercial value of timber removed prior to prescribed burning. Alternative A would not meet the need of providing economic opportunities for the local economy, and Alternative D would not utilize the commercial value of any timber removed.

After examining traditional economic benefits, I also reviewed and assessed the trade-offs of non-traditional economic factors for qualitative resources analyzed in the EIS. I used the matrix shown on page IV-54 in the EIS. I did not use the matrix to predict actual responses on the ground by alternative, or use them as absolute values, but I did use them as a comparison when assessing the relative differences between alternatives. The results are qualitative, but I feel that they deserve merit when reviewing the opportunities for the local population. On a biological, ecological, and social rating for desirable characteristics of non-economic factors the trade-off evaluation rating for Alternative B-Modified is good to high, Alternative A is poor to good, Alternative C is good to fairly high, Alternative D is fairly poor to good, and Alternative E is fairly good to high.

In addition to improving recreation opportunities enhancing wildlife habitat, and improving vegetative conditions, I estimate Alternative B-Modified will increase the potential for jobs in the local workforce. Business opportunities in surrounding communities should increase as expenditures for items such as gas, oil, food, and other needs increase. After harvest activities are completed, post sale work projects will still require private contract work that may be accomplished by using the local community workforce. Reforestation, thinning, vegetative stocking surveys, and seed and bank stabilization are a few examples of projects that can help extend restoration work for another 5 to 10 years.

In selecting Alternative B-Modified, I have attempted to find the best approach to improve both traditional and non-traditional economic opportunities as compared to Alternatives A, C, D, and E.

How Environmental Issues were Addressed

Key Issue 1 –Effects of proposed activities on ecosystem sustainability.

Ecosystem sustainability for this project is defined as *the ability to sustain diversity, productivity, health, renewability, the capability of withstanding stress, and/or the ability to sustain yields of desired values, resources, uses, products, or service from an ecosystem while maintaining the integrity of the ecosystem over time.*

Some of the most obvious effects of management activities are those which occur to the vegetative component of forest stands and landscapes. Timber harvest, prescribed fire, and other vegetative manipulations can alter processes, direct the flow of energy, and orchestrate the manner in which material is cycled within an ecosystem. They can change stand structure, alter species composition, accelerate or retard sucessional stages and reduce stand density, which can improve vigor and stimulate growth of residual trees.

Alternative A would provide no direct or indirect improvements to forest health or ecosystem sustainability. Alternative A would not manipulate any vegetation; therefore, forest stands would continue to become more dense and stressed from overcrowding. Trees would be less able to survive attacks by insects and disease as a result of their stressed condition. Shade-tolerant trees such as Douglas fir and grand fir, which are susceptible to a larger variety of insects and disease, would become established. Alternative A would not modify or reduce any excess fuels, and would allow fuels to continue to increase. Prescribed fire would not be introduced in the Upper Charley analysis area on a landscape basis. Normal fire suppression activities would continue, but wildfires could be more difficult and unsafe to control due to increasing fuel build-up.

Alternatives B-Modified, C, and E would use commercial timber harvest as well as prescribed fire to reduce stocking density and begin the process of changing existing species composition to more historic seral species, resulting in forest stands that would be consistent with long-term disturbances. Forest stands would be treated in each alternative using one of four silvicultural prescriptions, (1) Uneven-aged Management, (2) Thinning from Below, and (3) Shelterwood Group Selections, and (4) Pre-commercial Thinning. Approximately 3,699 acres of forest stands would be commercially treated in Alternative E, 3,181 acres will be treated in Alternative B-Modified, 1,905 acres in Alternative C, and 0 acres in Alternative D.

It is estimated that approximately 58 percent (4,015 acres) of forested area within Upper Charley overstocked resulting in mortality in the intermediate and suppressed age classes due to competition for

growing space, water and nutrients. Alternative B-Modified will treat less acres of overstocked stands than Alternative E, but more acres than Alternatives C or D

Some, but not all, subalpine fir and grand fir trees 21 inches, or greater dbh, will be designated for harvest in Alternatives B-Modified. Alternatives C and E also proposed to harvest some subalpine fir and grand fir trees 21 inches or greater. These trees are located in overstocked stands, or in stands identified where growth and vigor are low, and are more susceptible to disease and insect infestation. The overall health of each stand was considered before any trees 21 inches or greater dbh were designated for harvest. Trees 21 inches and greater dbh considered best for wildlife purposes were not selected for timber harvest but will be designated for protection. We will be within guidelines established in the "Screens" amendment to the Forest Plan by harvesting some trees 21 inches and greater dbh, since both biophysical groups (grand fir and subalpine fire) are within their historical range of variability (HRV) in the Asotin Watershed. Harvesting trees this size can occur as long as LOS (late/old stage) conditions do not fall below HRV. Late/old growth structure will still be maintained with the implementation of Alternative B-Modified.

I have selected Alternative B-Modified because it addresses multiple resource needs. It will reduce the most acres of overstocked stands, thereby, promoting the sustainability of current and future forest stands, still meet Forest Plan standards for big game Satisfactory Cover, incorporate lynx habitat protection strategies, and protect fish habitat.

All action alternatives (B-Modified, C, D, and E) propose to use prescribed fire throughout the landscape as a tool for fuels and hazard reduction. Although the areas proposed for prescribed fire treatment to reduce fuels and lower wildfire risk potentials are similar, different fire prescriptions would be used, depending on the amount of vegetative treatment prior to burning. Since there is no commercial timber harvest proposed for Alternative D there is a chance that fire prescription objectives may not be met, because not all of the vegetation that needs to be removed would be accomplished with mechanical thinning. A given reality is that the possible lack of project funding for activities in Alternative D may also hinder prescribed fire opportunities.

All prescribed fire treatments in all action alternatives will reduce but not eliminate the potential risk of large wildfires in the Upper Charley analysis area. The risk of large fires in an area is a function of a number of variables, including: (1) forest conditions, (2) weather conditions at the time of the fire, (3) topography, and (4) the chance occurrences of ignition from lightning or other sources.

I selected Alternative B-Modified because compared to Alternative C it will implement more fuel treatments over a larger area, and provide for optimizing mechanical treatments in forest stands (3,093 acres vs. 1,882 acres respectively). Compared to Alternative D, Alternative B-Modified will treat fewer acres with only a prescribed fire prescription and no pre-treatment (1,255 acres vs. 2,053 acres). Prescribed fire used alone with no pre-treatment, results in more stand conversion fire entries on more acres in order to convert them to desired fuel and structure profiles. I eliminated Alternative E because it had the highest risk of possible adverse effects to streams and riparian areas due to the proposal of active management within Class IV RHCAs.

Key Issue 2 – Effects of proposed activities on big game habitat.

No new management activities would take place in Alternative A. The amount of forage areas would gradually decline over the long-term as previously created openings are reestablished with trees (based on past history of aggressive wildfire suppression in the area). In time, the quality of valuable forage would

also decline as understory trees increase in density and size and shade-out herbaceous browse species. Ground and ladder fuels and the risk of stand-replacement fires would continue to increase. Alternative A would not reduce fuel accumulations or stocking levels to help control wildfires. Alternative A would not use prescribed fire to enhance wildlife habitat.

Responding to comments received during scoping and after the DEIS was published, I have modified Alternative B and deferred management activities of harvest and prescribed fire in 19 units (385 acres) in this decision in order to ensure the project was within Forest Plan standards for Satisfactory Cover. This modification will result in approximately 11% of the Upper Charley analysis area remaining in Satisfactory Cover, exceeding the Forest Plan standard of 10%, and will allow for better distribution of remaining cover in the area.

I consider Alternative B-Modified to be a balance between Alternative C, which was designed to optimize big game habitat, and Alternative B, which focused on multiple resources on a landscape basis. With incorporated modifications, Alternative B-Modified not only protects big game habitat conditions, but also responds to multiple resource management to improve ecosystem sustainability in the Upper Charley subwatershed. Alternative B-Modified will manage big game habitat values for the long-term, reduce the risk of large-scale loss of coniferous tree cover due to wildfire, and begin the reestablishment of vegetative composition to a more historic range, thereby improving the sustainability and vitality of current and future stands. Alternative E would offer the least protection for big game habitat, and Alternative D would have a high rating for optimum total cover, but would take longer to achieve other resource objectives.

All action alternatives would result in elk HEI levels that are above the Forest Plan standard of 40.0 for Management Area E2 (where the majority of timber harvest is proposed). Elk HEI calculations for action alternatives are as follows: Alternative C - 75.1; Alternative B-Modified – 67.5; Alternative D - 70.1; and Alternative E - 65.3.

Restoration/enhancement projects incorporated in all action alternatives of planting native plant species and treating noxious weeds will provide better forage for big game. Seeding native grasses, shrubs, and forbs will help reduce sedimentation. Alternative A is the only alternative that would not implement any restoration/enhancement projects.

Key Issue 3 - Effects of proposed activities on water quality and fish habitat.

No adverse effects to riparian ecosystem functions, channel conditions, aquatic fish habitat conditions and beneficial uses would likely result from implementing Alternative A, until the failures of existing non-stabilized roads, and existing undersized culverts occurred. Channel conditions and riparian plant communities would remain unchanged. No in-channel or riparian restoration/enhancement projects would be implemented. New roads would not be constructed, nor would erosion-prone roads be reconstructed to reduce sediment flow. Activities to reduce fuel accumulations and the risk for catastrophic wildfire would not take place.

Alternative B-Modified, C, D, and E propose to reduce overall road density by obliterating 22.67 miles of road. Road reconstruction work proposed in all action alternatives consists mainly of road resurfacing, and removing degraded and undersized culverts and replacing them with armored rolling drain dips. In Alternative B-Modified, over the short-term, road reconstruction and obliteration will increase sediment delivery to stream channel, but these effects will be partially offset by immediate improvements in drainage and infiltration which will lead to reduced erosion and sedimentation impacts to stream

channels. The amount of sediment released in the short-term is considered immeasurable when looking at long-term effects.

To ensure the protection of fish and water quality elements I have decided to include additional monitoring elements in Alternative B-Modified for water quality/fish habitat. They are listed in Appendix E of this document. I will require the District Zone Hydrologist and District Fish Biologist be present when stream restoration projects are implemented to ensure proper placement and protection of water resources. All water quality and fish habitat work will be scheduled within the working window of July 15 – August 15 to protect fish habitat.

Stream temperatures would remain unchanged with the implementation of Alternative A because there would be no measurable changes in streamflows, shading, and channel morphology. Over time there would be an increased risk of wildfire, because of fuel and stand conditions. Hydrologic effects would depend on fire intensity and severity, and post-fire climatic conditions.

With implementation of Alternative B-Modified measurable impacts to stream temperatures will be unlikely, because PACFISH buffers will continue to protect the existing vegetation in RHCAs. Over the short-term slight changes may occur because of an increase in peak flows and sedimentation effects on channel morphology. Over the long-term, improvement in stream temperatures will occur because of improved infiltration and water storage associated with road and channel treatments. It is unlikely that water temperature will exceed the Washington State standard of 61 degrees F for Alternatives B-Modified, C and D, because of existing PACFISH buffers, and not removing any shading along the RHCAs. Past monitoring shows 7-day average maximum water temperature at 57 degrees F for Charley Creek.

There will be no prescribed fire ignition in RHCAs in Alternatives B-Modified, C, and D, but fire will be allowed to back into the area. Since no fuel treatments are proposed for Alternative A; it has the highest risk of catastrophic wildfire and the highest risk of adverse effects to water quality and fish habitat.

In the short-term, proposed actions in Alternative B-Modified may result in an increase in the rate of fine sediment delivery to Charley Creek and its tributaries, but we do not anticipate that enough sediment will be delivered to adversely effect steelhead or Chinook. Over the long-term, benefits to salmonid habitat are expected by obliterating and reconstructing roads, and reducing the risk of stand destroying fire.

Key Issue 4 – How should roads be managed in the Upper Charley analysis area?

The amount of roads on the landscape and open to public use has direct effects on water quality, fish habitat, wildlife habitat and other resources. The more miles of road the greater the potential for effects.

Alternative A would not implement any road obliteration, road closures, or reconstruction to improve overland sediment flow, or improve the hydrologic function of some existing roads. Roads in the Upper Charley subwatershed would be managed and maintained, as they are now with the same amount of access available for recreational use.

Alternative B-Modified will reduce overall road density (which includes open, seasonally open, non-system and closed roads) from 6.54 mi./sq. mi. to 4.64 mi./sq. mi. This will result in a 30% decrease in overall road density. Alternatives D and E propose 18.10 miles of road reconstruction to remove and replace degraded culverts and some road surface work to improve the hydrologic function of existing roads. Alternative B-Modified will reconstruct approximately 11.5 miles, and Alternative C proposes

13.66 miles of road reconstruction, closing 4.44 miles of road 4206 for a seasonal elk calving closure, and placing a year round closure on road 4206100 and all of its tributaries. All action alternatives would obliterate 22.67 miles of non-system and system roads that are no longer needed, thereby reducing open road density from 2.17 mi./sq. mi. to 2.12-mi./sq. mi. Alternative C would reduce open road density to 1.57 mi./sq./mi. with the incorporation of the year-round closures.

Alternative C reduces overall road density slightly more than Alternative B-Modified. When selecting an alternative I considered the concerns of a variety of users. Some hunters want more motorized access for easier hunting and less work in retrieving downed game, and other hunters want more road closures and less access to allow more walk-in hunting opportunities. Most of the recreation in the area is dispersed recreation with a variety of users. The most common activities are hunting, camping, sightseeing, mushroom picking, berry picking, horseback riding, snowmobiling, and hiking.

I selected Alternative B-Modified because I wanted to maintain a road system that will permit adequate access to the area in the future for resource management, wildfire suppression, and for continued recreational enjoyment of the area. As mentioned previously what we are leaving open are main arterial roads, and although secondary roads will be gated, this decision does not totally preclude future use.

FINDINGS REQUIRED BY LAW, REGULATION, AND AGENCY POLICY

Numerous laws, regulations, and agency directives require that my decision be consistent with their provisions. I have determined that my decision is consistent with all laws, regulations, and agency policy. The following summarizes findings required by major environmental laws.

National Forest Management Act (NFMA), 1976

The National Forest Management Act (NFMA) and accompanying regulations require that several specific findings be documented at the project level. They are:

1. **Consistency with Forest Plan (as amended):** The Umatilla National Forest Land and Resource Management Plan (Forest Plan) establishes management direction for the Umatilla Forest. The management direction is achieved through the establishment of Forest goals and objectives, standards and guidelines, and Management Area goals and accompanying standards and guidelines. Project implementation consistent with this direction is the process by which we move toward the desired condition described by the Forest Plan. Forest Plan direction provides the sideboards for project planning. In addition, the National Forest Management Act requires that all resource plans are to be consistent with the Forest Plan. The EIS displays the Forest Plan and Management Area goals and objectives and the standards and guidelines applicable to the Upper Charley analysis area. (EIS, pages III-1 & 2). The alternative development process and the management goals of the alternatives are described in the EIS, Chapter II. The environmental consequences of the alternatives in relation to the Forest Plan standards and guidelines are displayed in the EIS, Chapter IV.

2. **Suitability for Timber Production: - No timber harvest, other than salvage sales or sales to protect other multiple-use values, shall occur on lands not suited for timber production.**
   All acres proposed for timber harvest in Alternative B-Modified are designated as suitable for timber production as stated in the Umatilla National Forest Plan and indicated on pages III-1 - 2 of the EIS.

   Analysis of current and historical regeneration data for the project area supports the conclusion that

adequate stocking of the proposed harvest units is assured if site-preparation efforts occur in a timely manner following harvest. The analysis file contains supporting documentation of current and historical reforestation data.

3. **Clearcutting and Even-aged Management: -When timber is to be harvested using an even-aged management system, a determination that the system is appropriate to meet the objectives and requirements of the Forest Plan must be made and where clearcutting is to be used, must be determined to be the optimum method.**

   Alternative B-Modified does not include clearcutting of any harvest unit. The Project File contains further documentation of silvicultural systems considered. Even-aged management (Shelterwood Group Selection) will be used in Alternative B-Modified. Timber stands within the Upper Charley analysis area have evolved within a fire-dependent ecosystem. Within the Upper Charley analysis area, Forest Plan objectives and requirements related to vegetation management are most clearly achieved through the use of even-aged management.

   It is my determination that proper use of even-aged systems on appropriate sites can provide us with healthy, functioning ecosystems while providing a sustainable production of forest resources.

   I have determined that the silvicultural systems in Alternative B-Modified are appropriate to meet the objectives and requirements of the Forest Plan.

4. **Vegetation Manipulation:**

   Be best suited to the goals stated in the Forest Plan.
   These goals are stated in the EIS within Chapters I and III. Based upon review of pertinent information from the EIS and Project File, I have determined that Alternative B-Modified is best suited to meet these goals while responding to public concerns.

   Assure that technology and knowledge exists to adequately restock lands within five years after final harvest. The knowledge and technology currently exists to adequately restock the harvested areas and documented in the Project File.

   Not to be chosen primarily because they will give the greatest dollar return. The decision to implement Alternative B-Modified was based on a variety of reasons as discussed earlier in this decision. Economics was one of the many factors I considered. I reviewed traditional as well as non-traditional economic factors. I used a qualitative matrix (EIS page IV-54) to assess the trade-offs between alternatives. On a biological, ecological, and social rating for desirable characteristics of non-economic factors Alternative B-Modified rated good to high.

   Be chosen after considering potential effects on residual trees and adjacent stands. The selection of Alternative B-Modified did consider the effects on residual trees and adjacent stands as evidenced in the discussions in the EIS (Vegetation section, pages IV-21-29) and Silviculture Report located in the project file.

   Be selected to avoid permanent impairment of site productivity and ensure conservation of soil and water resources. Alternative B-Modified does avoid impairment of site productivity. This determination is supported by the disclosures in the EIS (pages IV-1-10) and the application of BMPs to prevent the loss of soil as displayed in the EIS, Appendix B.

Be selected to provide the desired effects on water quality and quantity, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation uses, aesthetic values, and other resource yields. Alternative B-Modified does provide the desired effect on the above resources. The Standards and Guidelines contained in the Forest Plan are designed to provide the desired effects of management practices on the other resources values. The Selected Action meets or exceeds applicable Standards and Guidelines, as noted under "Consistency with Forest Plan" in this section.

Sensitive Species Federal law and direction applicable to sensitive species include the National Forest Management Act and the Forest Service Manual (2670). The Regional Forester has approved the sensitive species list – those plants and animals for which population viability is a concern. In making my decision, I have reviewed the analysis and projected effects on all sensitive species listed as possibly occurring on the Umatilla National Forest. Biological evaluations were prepared to assess potential effects to sensitive species as identified by the Regional Forester. This evaluation determined that while there may be impacts to individual sensitive species, those effects are not likely to contribute to a trend towards federal listing or loss of viability of the population or species.

The National Environmental Policy Act (NEPA), 1969: NEPA established the format and content requirements of environmental analysis and documentation, such as the Upper Charley Subwatershed Ecosystem Restoration Projects. The entire process of preparing an environmental impact statement was undertaken to comply with NEPA.

The National Historic Preservation Act: The Washington State Historic Preservation Office (SHPO) has been consulted concerning proposed activities in the Upper Charley analysis area. The Advisory Council on Historic Preservation (ACHP) will be consulted about measures to protect significant archaeological sites from adverse effects, should any be identified.

Clean Air Act Amendments, 1977: Alternative B-Modified is designed to meet the National Ambient Air Quality standards through avoidance of practices that degrade air quality below health and visibility standards. The Washington State Smoke Management Plan will be followed to maintain air quality. The number of acres and fuel type burned will be dependent on meeting air quality standards. The Washington Department of Natural Resources is the governing agency for air quality in Washington. The Pomeroy Ranger District is in constant contact with their meteorologist who determines if prescribed burning projects will meet Washington State smoke management guidelines using current and predicted air quality conditions and current forecasted weather conditions. The WSDNR has the authority to stop any and all burning activities if conditions are not appropriate.

The Pomeroy Ranger District has developed a working relationship with the Lewis Clark Air Quality Advisory Committee in Lewiston, Idaho. We meet with this group on a regular basis and in advance of prescribed fire implementation to inform them of our project location, fuel types, and planned time of ignition. Invitations to join District fire personnel during prescribed fire activities have been extended to committee members.

The Clean Water Act, 1982: Alternative B-Modified will meet and conform to the Clean Water Act as amended in 1982. This act establishes a non-degradation policy for all federally proposed projects. The selected Alternative meets anti-degradation standards agreed to by the State of Washington and the Forest Service, Region 6, in a Memorandum of Understanding (Forest Service Manual 1561.5).

this will be accomplished through planning, application, and monitoring of Best Management Practices (BMPs). Site-specific BMPs have been designed to protect beneficial uses.

The Endangered Species Act of 1973, as amended and Magnuson-Stevens Fishery Conservation and Management Act (MSA) of 2000: Biological assessments of Aquatic Species have been prepared to document possible effects of proposed activities on endangered and threatened species in the Upper Charley analysis area. Appropriate coordination, conferencing, and consultation with USFWS and NMFS have been completed. Letters of concurrence located in the analysis file meet the requirements of the ESA and MSA.

OTHER POLICY OR GUIDING DOCUMENTATION:

The FEIS for Managing Competing and Unwanted Vegetation, November 1988, Record of Decision signed December 1988, and the requirements of the Mediated Agreement, signed May 1989, guide the policies for managing competing and unwanted vegetation used in this decision. This project will use prevention as the main strategy to manage unwanted and competing vegetation, and will incorporate all measures contained in the above documents. Specifics of managing competing and unwanted vegetation are documented in the Noxious Weed Report for this project.

The Umatilla National Forest Land and Resource Management Plan, as amended, provided the framework for the development of all the alternatives.

During the fall of 1996, scientists associated with the Interior Columbia Basin Ecosystem Management Project (ICBEMP) released a summary of their integrated assessment of the ecological integrity and the socioeconomic resiliency of the Upper Columbia River Basin (Quigley et al., 1996). The Upper Charley proposal has been reviewed in light of the current interpretation and my understanding of the information provided in the integrated scientific assessments. I conclude that this decision appropriately considered this information.

The report entitled *Wildfire and Salvage Logging – Recommendations for Ecologically Sound Post-Fire Salvage Management and Other Post-Fire Treatments on Federal Lands in the West*,(1995) by Beschta et. al. is not referenced in this decision because the proposed project is not considered salvage logging project, and it is not a result of a wildfire.

THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE

In this ROD, I have described Alternative B-Modified and given rationale for its selection. It is also required by law that one or more environmentally preferable alternatives be disclosed. The environmentally preferable alternative is not necessarily the alternative that will be implemented, and it does not have to meet the underlying need for the project. It does, however, have to cause the least damage to the biological and physical environment and best protect, preserve, and enhance historical, cultural, and natural resources [Section 101 NEPA; 40 CFR 1505.2(b)].
In the case of the Upper Charley Subwatershed Ecosystem Restoration Projects EIS, I have determined that Alternative B Modified is the environmentally preferable alternative. Alternative B-Modified protects big game habitat by meeting Forest Plan standards and guidelines for Satisfactory Cover as well as providing for big game forage. Alternative B-Modified is within guidelines established for lynx

habitat, and it ensures the continued protection of water quality and fish habitat. Timber harvest and prescribed fire treatments identified in Alternative B-Modified address current problems in the area regarding vegetation stocking levels, growth rates, tree species composition, elevated levels of insects and disease, and fuel loads.

Alternative C focuses mainly on the retention and enhancement of big game habitat and would return fewer stands to healthier stocking levels or historic seral species. Alternative D would use prescribed fire and non-commercial mechanical thinning to implement ecosystem sustainability. Implementing Alternative D would occur over a longer period of time, and implementation of activities could be dependent on Congressional funding sources. Alternative E would return the most acres of stands to historic stocking levels, tree composition, and seral species, but it would not meet Forest Plan standards and guidelines for Satisfactory Cover.

MITIGATION MEASURES

Mitigation measures are site-specific management activities designed to reduce the adverse impacts of the proposed activities. Mitigation measures will be applied to project design and layout, during, and after activities. Mitigation measures will be implemented through project design, contract specifications, contract administration, and monitoring by Forest Service personnel.

As part of my decision, I am choosing to implement the mitigation measures identified in the EIS (pages II-31 – 34 and Appendix B). I am confident that selected mitigation measures will adequately prevent adverse effects for the following reason: the selected mitigation measures are practices we have used successfully in the past; they are State-recognized best management practices for protecting water quality; or they are based on current research.

MONITORING

Monitoring of the Upper Charley Subwatershed Ecosystem Restoration Projects EIS is designed to accomplish three purposes: 1) to assure that all aspects of the project are implemented as intended; 2) to determine that the effects of the activities are consistent with the intent; and 3) to allow adaptation if it is found that activities are not being implemented correctly or are not having the desired effects. For example, monitoring for fuel consumption and hazard reduction, if prescribed fire treatments are not resulting in the expected results, additional fire treatments may be needed. Monitoring will be conducted prior to project activity, during project activity and after project activity. Specific monitoring items can be found in the EIS (pages II-35–36) and Appendix E of this document.

IMPLEMENTATION

I have reviewed the Upper Charley Subwatershed Ecosystem Restoration Projects EIS, and its associate appendices. I feel there is adequate information within these documents to provide a reasoned choice of action. I am fully aware of the possible adverse environmental effects that cannot be avoided, and the irreversible/irretrievable commitment of resources associated with the selected alternative. I have determined that these risks will be outweighed by the likely benefits. Implementing Alternative B-

Modified will cause no unacceptable cumulative impact to any resource. There will be no significant impact to cultural resources, consumers, civil rights, minority groups, or women. There are no unusual energy requirements for implementing the Selected Alternative. The EIS adequately documents how compliance with these requirements is achieved.

PROCEDURE FOR CHANGE DURING IMPLEMENTATION

Minor changes may be needed during implementation to better meet on-site resource management and protection objectives.

In determining whether and what kind of further NEPA action is required, the Responsible Official will consider the criteria for whether to supplement an existing Environmental Impact Statement in 40 CFR 1502.9 (c) and FSH1909.15, sec. 18, and in particular, whether the proposed change is a substantial change to the intent of the Selected Alternative as planned and already approved, and whether the change is relevant to environmental concerns. Connected or interrelated proposed changes regarding particular areas or specific activities will be considered together in making this determination. The cumulative impacts of these changes will also be considered.

The intent of field verification prior to my decision was to confirm inventory data and to determine the feasibility and general design and location of a unit, not to locate the final boundaries or road locations. Minor adjustments to timber and fire units boundaries may be needed during final layout for resource protection, to improve logging system efficiency, and to better meet the intent of my decision. Many of these minor changes will not present sufficient potential impacts to require any specific documentation or action to comply with applicable laws.

APPEAL PROVISIONS AND IMPLEMENTATION

This decision is subject to appeal pursuant to Forest Service regulations at 36 CFR 215.7. Any written appeal must be postmarked or received by the Appeal Deciding Officer, Harv Forsgren, Regional Forester, ATTN: 1570 APPEALS, P.O. Box 3623, Portland, Oregon 97208-3623 within 45 days of the date of publication of the legal notice announcing this decision in the East Oregonian Newspaper.

It is the responsibility of those who appeal a decision to provide the Regional Forester sufficient written evidence and rationale to show why my decision should be changed or reversed. The written notice of appeal must:

- State that the document is a Notice of Appeal field pursuant to Title 36 CFR Part 215;
- List the name, address, and if possible, a telephone number of the appellant;
- Identify the decision document by title and subject, date of the decision, and name and title of the Responsible Official;
- Identify the specific change(s) in the decision that the appellant seeks or portion of the decision to which the appellant objects; and
- State how my decision fails to consider comments previously provided, either before or during the comment period specified in Title 36 CFR 215.6 and, if applicable, how the appellant believes the decision violates law, regulation, or policy.

If no appeal is received, implementation of this decision may occur on, but not before, five business days from the close of the appeal filing period. If an appeal is received, implementation may not occur for 15 days following the date of appeal disposition.

CONTACT PERSON

For additional information concerning the specific activities authorized with my decision, you may contact:

Randall Walker
Environmental Coordinator/Silviculturist
Pomeroy Ranger District
71 West Main Street
Pomeroy, Washington 99347
(509) 843-1891

_____ _____
MONTE FUJISHIN date
District Ranger

Alternative-B – Summary of Specific Features

Restoration/Enhancement Projects	
In-channel and stream restoration projects (log weirs, rip rap and boulders)	Yes
Placement of Grouse/turkey cisterns	Yes
Aspen habitat restoration	Yes
Dispersed campground development	Yes
Pond reconstruction	Yes
Placement of bat boxes	Yes
Control and prevent noxious weeds	Yes
Plant native hardwoods, shrubs, forbs, and grasses	Yes
Roads	
Road obliteration – miles	22.67
Road reconstruction – miles	18.10
Temporary road construction (obliterated subsequent to use) – miles	5.23
Fuel treatments (outside harvest units)	
Fire Prescription RXF – acres	1355
Fire Prescription THRXF – acres	346
Fire Prescription FYRXF – acres	56
Fuel treatments (inside harvest units)	
Fire Prescription CMRXF – acres	2456
Fire Prescription HJP – acres	585
Fire Prescription LTRXF – acres	437
Vegetation Treatments – Commercial Harvest	
Thinning from Below HITH – acres	753
Uneven-aged Management HSEI – acres	2293
Shelterwood Group Selection HSSW – acres	520
Vegetation Treatments – Non-Commercial	
Pre-commercially thinned PCT – acres	938
Plant native tree seral species – acres	1200
Logging Methods	
Helicopter – acres	792
Skyline – acres	1194
Tractor – acres	1580
Volume of timber commercially harvested	
Million Board Feet – MMBF/Hundred Cubic Feet – CCF	18.9/35,790

Alternative-C – Summary of Specific Features

Restoration/Enhancement Projects	
In-channel and stream restoration projects (log weirs, rip rap and boulders)	Yes
Placement of Grouse/turkey cisterns	Yes
Aspen habitat restoration	Yes
Dispersed campground development	Yes
Pond reconstruction	Yes
Placement of bat boxes	Yes
Control and prevention of noxious weeds	Yes
Planting of native hardwoods, shrubs, forbs, and grasses	Yes
Roads	
Road obliteration – miles	22.67
Road reconstruction – miles	13.66
Temporary road construction (obliterated subsequent to use)	1.70
Fuel treatments (outside harvest units)	
Fire Prescription RXF – acres	1707
Fire Prescription THRXF – acres	587
Fire Prescription FYRXF – acres	28
Fire Prescription DFRXF – acres	613
Fire Prescription CMRXF – acres	39
Fire Prescription THJP – acres	57
Fire Prescription JP – acres	343
Fuel treatments (inside harvest units)	
Fire Prescription CMRXF – acres	1143
Fire Prescription HJP – acres	202
Fire Prescription LTRXF – acres	537
Vegetation Treatments – Commercial Harvest	
Thinning from below HITH – acres	488
Uneven-aged management HSEI – acres	975
Shelterwood group selection HSSW – acres	442
Vegetation Treatments– Non-Commercial Harvest	
Pre-commercially thinned PCT – acres	938
Planting of native seral tree species – acres	1200
Logging Methods	
Helicopter – acres	398
Skyline – acres	518
Tractor – acres	989
Volume of timber commercially harvested	
Thousand Board Feet – MMBF/Hundred Cubic Feet - CCF	11.5/21,569

Alternative-D – Summary of Specific Features

Restoration/Enhancement Projects	

In-channel and stream restoration projects (log weirs, rip rap and boulders)	Yes
Placement of Grouse/turkey cisterns	Yes
Aspen habitat restoration	Yes
Dispersed campground development	Yes
Pond reconstruction	Yes
Placement of bat boxes	Yes
Control and prevention of noxious weeds	Yes
Planting of native hardwoods, shrubs, forbs, and grasses	Yes
Roads	
Road obliteration – miles	22.67
Road reconstruction – miles	18.10
Temporary road construction (obliterated subsequent to use) - miles	3.34
Fuel treatments for the entire analysis area	
Fire Prescription RXF – acres	2053
Fire Prescription THRXF – acres	346
Fire Prescription FYRXF – acres	1695
Fire Prescription DFRXF – acres	578
Fire Prescription THJP – acres	40
Fire Prescription FYJP – acres	533
Fuel treatments (inside harvest units)	
Fire Prescription CMRXF – acres	0
Fire Prescription HJP – acres	0
Fire Prescription LTRXF – acres	0
Vegetation Treatments – Commercial Harvest	
Thinning from Below HITH – acres	0
Uneven-aged Management HSEI – acres	0
Shelterwood Group Selection HSSW – acres	0
Vegetation Treatments– Non-Commercial	
Pre-commercially thinned PCT – acres	938
Planting of native seral tree species	1200 acres
Logging Methods	
Helicopter – acres	0
Skyline – acres	0
Tractor – acres	0
Volume of timber commercially harvested	
Thousand Board Feet – MMBF/Hundred Cubic Feet – CCF	0/0

Alternative-E – Summary of Specific Features

Restoration/Enhancement Projects	
In-channel and stream restoration projects (log weirs, rip rap and boulders)	Yes

Placement of Grouse/turkey cisterns	Yes
Aspen habitat restoration	Yes
Dispersed campground development	Yes
Pond reconstruction	Yes
Placement of bat boxes	Yes
Control and prevention of noxious weeds	Yes
Planting of native hardwoods,shrubs, forbs and grasses	Yes
Roads	
Road obliteration – miles	22.67
Road reconstruction – miles	18.10
Temporary road construction (obliterated subsequent to use) – miles	5.23
Fuel treatments (outside harvest units)	
Fire Prescription RXF – acres	1355
Fire Prescription THRXF – acres	346
Fire Prescription FYRXF – acres	56
Fire Prescription DFRXF – acres	0
Fuel treatments (inside harvest units)	
Fire Prescription CMRXF – acres	2,538
Fire Prescription HJP – acres	633
Fire Prescription LTRXF – acres	443
Vegetation Treatments – Commercial Harvest	
Thinning from Below HITH – acres	886
Uneven-aged Management HSEI – acres	2,293
Shelterwood Group Selection HSSW – acres	520
Vegetation Treatments – Non-Commercial	
Pre-commercially thinned PCT – acres	938
Planting of native seral tree species – acres	1200
Logging Methods	
Helicopter – acres	925
Skyline – acres	1,194
Tractor – acres	1,580
Volume of timber harvested	
Thousand Board Feet – MMBF/Hundred Cubic Feet – CCF	19.4/36,813

HARVEST AND PRESCRIBED FIRE UNITS NOT INCLUDED IN THIS DECISION

Table I is a listing of 19 harvest and prescribed fire units (385 acres) containing Satisfactory Cover that are not included in this decision.

Table I – Units Containing Satisfactory Cover Not Included in this Decision

Unit Number	Acres	Harvest Prescription	Logging System	Fire Prescription
005Z	11	HITH	Tractor	HJP
008Z	25	HITH	Tractor	HJP
017Z	21	HSSW	Skyline	HJP
022Z	15	HSEI	Skyline	CMRXF
024Z	7	HSSW	Skyline	HJP
025Z	15	HSSW	Skyline	HJP
087Z	14	HSSW	Helicopter	LTRXF
093Z	30	HSSW	Helicopter	LTRXF
100Z	20	HSSW	Skyline	LTRXF
101Z	18	HSSW	Helicopter	LTRXF
127Z	13	HSSW	Tractor	LTRXF
148Z	12	HSSW	Skyline	LTRXF
150Z*	8	HSSW	Tractor	LTRXF
160Z	22	HSEI	Skyline	CMRXF
162Z*	8	HSEI	Helicopter	CMRXF
179Z	39	HSEI	Skyline	CMRXF
187Z	40	HSEI	Helicopter	CMRXF
189Z	44	HSEI	Skyline	CMRXF
191Z*	23	HSEI	Skyline	CMRXF

*** - signifies partial unit**

Description of Abbreviations:

HSSW – Shelterwood Group Selection **HITH** – Thinning from below **HSEI** – Uneven-aged Management

HJP – Jackpot burning of heavy slash concentrations following mechanical tree removal.

CMRXF – A two entry fire treatment following mechanical tree removal. First entry would be a cool moist underburn or jackpot burn to remove both naturally occurring material and material created by mechanical treatment, and some remaining ladder fuels; if needed, a drier landscape prescribed fire would follow in subsequent years.

LTRXF – Used in higher elevation units that are jackpot burned. Residual overstory trees would be protected prior to burning. Landscape fire would follow these treatments.

COMPLIANCE WITH LYNX CONSERVATION MEASURES

The Canada Lynx Conservation Assessment and Strategy (LCAS, page 75) approved by the Region 6 Regional Forester in January 2000, states:

> *"The (following conservation measures) are intended to conserve the lynx, and to reduce or eliminate adverse effects from the spectrum of management activities on Federal lands. (The conservation measures.) are provided to. help avoid negative impacts through the thoughtful planning of activities. Plans that incorporate them, and projects that implement them, are generally not expected to have adverse effects on lynx, and implementation of these measures. is expected to lead to conservation of the species."*

Using this information, the Umatilla Forest in September 2000 submitted to the U. S. Fish and Wildlife Service (USF&WS) a Programmatic Biological Assessment (B. A.) of Proposed Projects for the Forest that covered projects proposed from September 2000 through November 2001. The Upper Charley Subwatershed Ecosystem Restoration Projects were included in this document. On February 20, 2001 the USF&WS issued a Biological Opinion on the document.

In the Forest Proposed Project B.A. two (2) levels of project design criteria were listed. The two levels, Criteria I and Criteria II of project design are defined as follows:

CRITERIA I - "must be used…because they are founded in the ESA requirements, current management direction, and/or standards and guidelines from the action agency LRMP. Criteria I aids in the conservation and recovery of listed species using current management direction."

CRITERIA II - "maybe discretionary by the action agency. Criteria II further reduces and/or negates the adverse affect of any project, which 'may affect' listed species."

The criteria were based on standards and guidelines in the conservation measures contained in the "Canada Lynx Conservations Assessment and Strategy (LCAS)" (Ruediger et al. 2000). Therefore, the LCAS is incorporated by reference in this Biological Assessment. The PDC is to be implemented in the context of LAU's (in this case, the Asotin LAU).

It is the purpose of this section to show how the proposed projects within delineated lynx habitat portion of the Upper Charley Subwatershed Ecosystem Restoration analysis area complies with the direction contained in the Umatilla Forest's Programmatic Biological Assessment of Proposed Projects dated Sept. 22, 2000.

CRITERIA I:

A. **Area Wide**

None of the PDC listed are applicable to proposed actions in the Upper Charley analysis area. There are no proposed actions that directly increase over-the-snow travel, affect existing ski areas, and no use of gopher bait is proposed.

B. **Landscape Vegetative Management**

1. "*Prepare a broad-scale assessment of landscape patterns within each LAU."*

   Proposed activities in the Upper Charley analysis area were analyzed in the context of the Asotin LAU. Neither the Forest, nor the Pomeroy District, has prepared a "broad-scale assessment of landscape patterns within the Asotin LAU. Using existing vegetative data, the Forest has developed a lynx habitat profile for the Asotin LAU. The results of this work are shown in Table II-1 (page 11) in the Forest's Proposed Project B.O. A summary of this information is presented in Table 1 below.

   Table 1 Asotin LAU Lynx Habitat Profile

Lynx Habitat in LAU (ac)	Acres Unsuitable Habitat (%)	Acres Denning Habitat (%)	Acres Foraging Habitat (%)
42,854	8,656 (20.2)	9,866 (23.0)	24,332 (56.8)

   "If more than 30 percent of lynx habitat within the LAU is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result of vegetation management activities…."

   This analysis of the Asotin LAU shows that presently the LAU contains approximately 20.2% Unsuitable Habitat. This is well below the 30% maximum level for the LAU. Actions proposed in the Upper Charley analysis area would convert approximately 390 acres of existing Forage Habitat to Unsuitable Habitat. This would increase the amount of Unsuitable Habitat in the Asotin LAU to 9,046 acres (21.1%). This is well below the 30% maximum.

2. *"Management actions shall not change more than 15% of suitable lynx habitat within the LAU to an unsuitable condition within a 10-year period. The 10- year period began January 1, 2000 and will end December 31, 2009.*

   15% of the 42,854 acres of lynx habitat in the Asotin LAU equals 6,428 acres.
   The 390 acres proposed for conversion to unsuitable equals 0.9%. This is well below the 15% figure mentioned.

3. *"In lynx habitat within an LAU, strive to manage the vegetative condition to within 20 percent of the (HRV) mid-point.*

On the District, all vegetative manipulation activities (timber sale, landscape prescribed burning, etc.) are aimed at achieving an appropriate HRV for Plant Association Groups (PAG's).

C. **Denning Habitat**

This section is not applicable to the Upper Charley analysis area, because no denning habitat has been identified in the analysis area with the latest Forest mapping work. Several measures (grapple piling, etc.) are planned to provide, or improve, future denning habitat in the area.

D. **Foraging Habitat**

1. "*Manage vegetation within (the) LAU to within 15 percent of the HRV mid-point for each Plant Association Group (PAG)"*

As with Denning Habitat, all vegetative manipulation activities on the District are aimed at achieving the appropriate HRV for each PAG.

2. *"Pre-commercial thinning is not permitted in lynx habitat while providing lynx habitat."*

No pre-commercial thinning is proposed within mapped lynx habitat in the Upper Charley analysis area.

3. *"In lynx habitat, maintain at least 1,200 trees per acre in all forage habitats, including all conifer stands. Emphasize lodgepole pine, subalpine fire and Englemann spruce for foraging habitat in any PAG…where it could occur as either a seral species or as the climax species."*

All proposed harvest units where this density could not be maintained are shown as being converted to Unsuitable Habitat. Emphasis was placed though on retention of lodgepole pine (where present) subalpine fir, and Engelmann spruce in the residual overstory to aid in re-establishment of these species in the future.

4. *"Allow harvest in aspen stands…."*

This is not applicable here, because no aspen stands within designated lynx habitat are proposed for entry.

5. *"….defer or modify management activities that would prevent the development of lynx foraging habitat."*

In all harvest units within delineated lynx habitat this was done by both retention of desirable overstory species (subalpine fir, Engelmann spruce, etc.) to promote establishment of a desirable forage area in the future and by limiting created fuels treatment to jackpot burning to protect residual small understory subalpine fir, spruce, etc.

6. *"Design burn prescriptions to maintain, regenerate, or create snowshoe hare habitat."*

As stated above, restricting fuels treatment in defined lynx habitat to just jackpot burning was aimed at accomplishing this. Also, 5 acre+ areas of downed log concentrations that can be safely retained (from fire risk point) will be retained to provide for future denning habitat value. Also,

grapple piling of downed logs, and retention of the piles; in some harvest units in close proximity to adjacent forage habitat would be done to provide for future denning habitat development.

7. *"Delay livestock use in post-harvest opening until successful regeneration of the shrub and tree component occurs."*

Many years of utilization inspections on the Peola Cattle Allotment have failed to find any significant use of conifer trees on the allotment, and shrub utilization has always been well below the 30% CAG utilization standard for riparian and 55% of Current Annual Growth (CAG) for uplands and transitory areas (recent clearcuts, etc.)

E. **Habitat Connectivity**

1. "Maintain habitat connectivity within and between LAU's"

Proposed activity in the Upper Charley Analysis Area would not affect connectivity between the Asotin LAU and the adjacent Wenaha LAU as it is located on the far northern end of the Asotin LAU and several miles from the interface between the two northern LAU's.

As for connectivity within the Asotin LAU, there would be several unharvested "corridors" in the analysis area (i.e. the Charley Creek RCHA) and Forage Habitat areas between proposed harvest units.

2. *"Key linkage areas."*

Biologically and geographically, this is not applicable to the Upper Charley Analysis Area for two (2) reasons:

(a) The small area of delineated lynx habitat in the analysis area is on the far northeast corner of the Asotin LAU.

(b) The north boundary of the 3-sided area of defined lynx habitat is non-lynx habitat (too low an elevation, non-forested, etc.) and both the west and east sides are on open, mostly non-forested natural ridgecrest openings (i.e. lynx non-habitat) with forest arterial roads passing through them (Forest Road 41 on the east and 42 on the west).

3. *"Powerlines"*

Not applicable to the Upper Charley Analysis Area (i.e. no power lines).

CRITERIA II

A. **Human Disturbance**

1. *"Manage open road density at less than or equal to 2 miles of road per square mile within LAU's"*

Because the Asotin LAU contains large amounts of both designated Wilderness (Wenaha-Tucannon) and Roadless Area, open road density for the LAU is well below the 2-miles/square mile level.

2. *"Minimize roadside brushing…."*

The only roadside brushing that would be done within the analysis area is to reduce safety hazards. Most all of this brushing activity would be on Forest Roads 41 and 42 (heavily used arterial roads).

3. "New road and trails…."

A total of 1.7 miles of new temporary road would be constructed. It is not possible to locate this new construction "…away from forested stringers." as their purpose is to access forest stands for harvest and fire treatments. This short length of road would be closed and obliterated upon completion of project activities from the units so they would only be present for a short period of time.

4. *"….public use on temporary roads…."*

During harvest of the units accessed by the new temporary roads, public use would be prevented due to public safety considerations. When the road(s) are no longer needed for project activity, they would be closed and physically blocked.

5. *"Minimize building roads ….on ridgetops…."*

This would be done, but there is little need for the new temporary roads to be located on ridgecrests as they would not effectively access most units. We would not build mid-slope temporary roads due to listed fish and water quality concerns. Most of the 1.7 miles of new temporary road(s) would be on the upper quarter of the slope.

6."...paving of gravel/dirt roads…"

Not applicable to the analysis area as no road paving of gravel/dirt roads proposed or present in the LAU.

7.". ...denning habitat greater than 300 feet from existing open roads."

Not applicable as <u>no</u> denning habitat defined in the Upper Charley Analysis Area.

8. "*Avoid construction of permanent fire breaks on ridges or saddles."*

Not applicable to the Upper Charley Analysis Area as no permanent firebreaks are proposed.
9."Minimize construction of temporary roads or machine firelines. during fire suppression."

None are planned within delineated lynx habitat in the analysis area, as only jackpot burning would be done. IF wildfire occurs in the area, minimal use of machine fire lines would be done in delineated lynx habitat.

B. **Landscape**

1. *"Provide a landscape of interconnected blocks of foraging habitat where snow compacting activities are minimized or discouraged."*

Within the Asotin LAU, because it contains so much natural landscape (i.e. designated Wilderness and Roadless area) both connectivity and minimal use of snow compacting activities is near the natural optimum for the northern Blue Mountains. Forage area connectivity would also be maintained within the designated lynx habitat portion of the Upper Charley Analysis Area.

2. "*…..private landowners…"*

Not applicable to the Upper Charley Analysis Area as no private lands in or near designated lynx habitat.

3. "*…use of herbicides…"*

Not applicable as no chemical use proposed.

4. "*….retain two slash piles per five acres after all treatments have occurred."*

In designated lynx habitat within the Upper Charley Analysis Area both natural and grapple piles would be retained well above this 2/acre level after all treatment is completed. Where possible unburned piles in several units would be retained in close proximity to adjacent Forage Habitat.

5. *"....enhance habitat for snowshoe hare… (etc.)….when formulating improvement harvests and prescribed fire prescriptions."*

This is being done in this project.

Conservation Measures Applicable to All Programs/Activites

"***Design vegetation management strategies that are consistent with historical succession and disturbance regimes.*"** (, Programmatic planning - objective 1)

An analysis of the vegetative Historic Range of Variability (HRV) and ecosystem sustainability for the Upper Charley Analysis Area was done early in the analysis process. Silvicultural and prescribed burning prescriptions proposed within the analysis area were also designed to be consistent with the results of this intensive analysis process.

"Conservation measures will generally apply only to lynx habitat on Federal lands within LAU's." (LCAS, Programmatic planning – standard 1)

This Biological Assessment presents as much as possible the effect(s) of the proposed actions to the Asotin LAU.

"*Lynx habitat will be mapped using criteria appropriate to each geographic area to identify appropriate vegetation and environmental conditions."* (LCAS, Programmatic planning – standard 2) Potential lynx habitat for the Forest was done at the Supervisor's Office in Pendleton using existing vegetative data base information. The mapping effort was done in coordination with other Forests in

northeast Oregon and was reviewed by the USF&WS. This Forest map was used as the base for delineation of lynx habitat on the Asotin LAU.

"To facilitate project planning, delineate LAU's" (LCAS, Programmatic planning standard 3)

Upon completion of habitat mapping at the Supervisor's Office in Pendleton, the entire Umatilla Forest was divided into twelve (12) LAU's using appropriate 6th code HUC criteria.

"…if more than 30 percent of lynx habitat within a LAU is currently in unsuitable condition, no further reduction of suitable conditions shall occur as a result of vegetation management activities by Federal agencies." (LCAS, Programmatic planning – standard 5)

Upon re-delineation of lynx habitat within the Upper Charley Analysis Area the existing level of Unsuitable Habitat in the Asotin LAU is 20.2%. This is 9.8% below the 30% maximum level mentioned here in the LCAS.

With conversion of 390 additional acres of Suitable Habitat (387 acres due to silvicultural and prescribed burning treatment plus 3 acres due to road obliteration) to Unsuitable Habitat, the total amount of Unsuitable Habitat for the Asotin LAU would increase from 20.2% to 21.1%. This is 8.9% below the 30% maximum mentioned here in the LCAS.

"Within each LAU, map lynx habitat. identify potential denning habitat and foraging habitat." (LCAS, Project planning – standard 1)

Using existing vegetative data on the Forest, the Supervisor's Office mapping effort identified the appropriate habitat profile for each LAU on the Forest. Refer to Table 1 on pg. 6 of the Upper Charley B.A. for the habitat profile identified by the Forest level mapping work for the Asotin LAU and Table 6 on pg. 8 for the profile for the re-defined habitat profile for the Asotin LAU upon completion of on-going and existing projects in the Asotin LAU.

"Within a LAU, maintain denning habitat in patches generally larger than 5 acres, on at least 10 percent of the area that is capable of producing stands with these characteristics." (LCAS, Project planning – standard 2)

The Forest mapping work identified 9,866 acres (23.0%) of Denning Habitat in the Asotin LAU. While no Denning Habitat was identified in the Upper Charley Analysis Area, the selective piling of large debris in several harvest units would provide for future development of Denning Habitat in the defined lynx habitat portion of the analysis area.

"Maintain habitat connectivity within….LAU." (LCAS, Project Planning –standard 3).

While not ideal, the connective un-harvested forest "corridors" provide for possible lynx movement through the analysis area from adjoining areas.

Also, many of the harvest areas presently contain adequate residual trees and shrubs to provide for lynx movement through the area largely undetected. In addition, the analysis area is not surrounded by delineated lynx habitat but rather on the periphery where connectivity to adjacent areas is not as biologically critical. Rather, due to the adjacency of low elevation area where bobcat, cougar, and coyotes are common, connectivity to the north and east can lead to increased competition for lynx from these other predators.

Conservation Measures and Timber Management Activities

"Evaluate historical conditions and landscape patterns to determine historical vegetation mosaics across (the landscape) through time." (LCAS, Programmatic planning – objective 1)

This was done for the Upper Charley Analysis Area by the Forest's Historic Range of Variability (HRV) analysis.

"Design regeneration harvest, planting, and thinning to develop characteristics suitable for snowshoe hare habitat." (LCAS, Project planning – objective 1)

Both shelterwood and commercial thinning prescriptions, and subsequent jackpot burning of created fuel concentrations, have been designed to retain healthy subalpine-fir and Englemann spruce overstory to serve as a seed source and shelter for future understory initiation of species of most value to snowshoe hare as winter forage. In some areas, the proposed jackpot burning would also encourage establishment of "pockets" of lodgepole pine without undo loss of the more desirable fire sensitive overstory trees retained by the marking prescriptions.

Use of prescribed underburning to treat created fuels would result in significant loss of the desirable fire sensitive overstory trees. This is the primary reason jackpot burning was selected as the desired method to treat created fuels in all three (3) types of harvest proposed.

The opening of the overstory in subalpine-fir and moist grand fir forest types to less than 100 square feet of basal area was also designed to encourage development of an understory of high value shade tolerant species of high value to snowshoe hares and/or encourage rapid development of western larch to provide overstory shade to encourage subsequent development of the more shade tolerant tree species (of most value to snowshoe as winter forage).

"Management actions…shall not change more than 15 percent of lynx habitat within a LAU to an unsuitable condition within a 10 year period. (LCAS, Project planning – standard 1)

The Upper Charley area is the only area within the defined lynx habitat portion of the Asotin LAU on the District where vegetation manipulation is proposed subsequent to the Forest's Biological Assessment for On-going and Existing Projects, dated May 9, 2000, forwarded to the USF&WS and received by them on May 15, 2000. Based on this document, prior to the effects of on-"going and existing" projects in the Asotin LAU, 8,428 acres (19.6%) of the LAU was in Unsuitable Habitat. Upon completion of the projects presented in the document for the Asotin LAU, the amount of Unsuitable Habitat in the LAU increased 210 acres to 8,638 acres. This is an increase of 0.6%.

This increase would not change with the "corrected" baseline shown in TABLE 6 on page 8 of the Upper Charley BA, as the projects used in the On-going/Existing BA are outside of the Upper Charley Analysis Area. Even with the "corrected" baseline, the present baseline of Unsuitable Habitat in the Asotin LAU is 20.2%.

Upon completion of proposed actions covered by this proposed activity, the amount of Unsuitable Habitat in the Asotin LAU would increase 0.9% to 21.1% (TABLE 8 on page 11of B.A.). This results in only approximately a 1.5% increase from that present before the on-going and existing project baseline. This is well below the 15% maximum mentioned in the LCAS.

"…pre-commercial thinning will be allowed only when stands no longer provide snowshoe hare habitat (e.g. self-pruning processes have eliminated snowshoe hare (value) during winter conditions…." (LCAS, Project planning – standard 3)

No pre-commercial thinning is being proposed within delineated lynx habitat in either the Upper Charley Analysis Area or the Pomeroy Ranger District inside of the Asotin LAU boundary. It is being deferred for lynx habitat benefit ad directed by the LCAS.

"Plan regeneration harvests in lynx habitat where little or no habitat for snowshoe hares is currently available…" (LCAS, Project Planning guide- line 1)

This is one of the primary reasons shelterwood regeneration is proposed in some very dense unhealthy stands of mixed subalpine-fir, Engelmann spruce, and grand fir within delineated lynx habitat in the analysis area. The dense canopy has precluded development of a seedling/sapling/large shrub understory that could be used during the winter by snowshoe hares. Opening up the forest canopy would also allow development of a mixed shrub and sapling understory, which would in-turn provide high quality winter snowshoe Forage Habitat within 20-25 years.

"Provide for continuing availability of foraging habitat in proximity to denning habitat." (LCAS, Project planning – guideline 1c)

This is why we plan to grapple pile downed logs in harvest units (future Forage Habitat) and in existing mapped Forage Habitat.

"In areas where recruitment of additional denning habitat is desired. Consider improvement harvests. Improvement harvests should be designed to:

- ***a) Retain and recruit the understory of small diameter conifers and shrubs preferred by hares;***
- ***b) Retain and recruit coarse woody debris….***
- ***c) Maintain or improve the juxtaposition of denning and foraging habitat."*** (LCAS, Project planning – guideline 2)

As noted earlier, Forest level mapping of lynx habitat determined there was no suitable Denning Habitat within the Upper Charley Analysis Area. As mentioned earlier, silvicultural prescriptions (retain understory where possible), prescribed burning (protect piles of large downed logs in at least 5 acre blocks where possible) and grapple piling and retention of log piles in close proximity to existing, and future Forage Habitat.

In the future, as young trees develop into Forage Habitat in these areas, the log piles can serve as denning sites actually within suitable Forage Habitat. Given a few years, most of the remaining forested areas now defined as Forage Habitat would continue to develop Denning Habitat characteristics.

Conservation Measures and Wildland Fire Management

"Design vegetation and fire management activities to retain or restore denning habitat on landscape settings with highest probability of escaping stand-replacing fire events." (LCAS, Programmatic planning- objective 5)

This is the primary reason we have proposed piling of large logs and fine fuels in some harvest units (concentrating fuels) to both provide the structure for future denning use as well as concentrate the fuel bed, minimize use of jackpot burning, and reduce overstory mortality (create additional heavy fuels, etc.).

"Design burn prescriptions to regenerate or create snowshoe hare habitat (e.g., regeneration of aspen and lodgepole pine)." (LCAS, Project planning – standard 2)

The proposed use of jackpot burning in forest types containing lodgepole pine as a component would encourage "pockets" of lodgepole pine to become established due to effect(s) of heat on the serotinous lodgepole pine cones. We cannot conduct more extensive prescribed underburning due to need to retain fire sensitive overstory, and understory, tree species (subalpine-fir, Engelmann spruce, etc.) to provide winter forage for snowshoes as soon as possible.

"Design burn prescriptions to promote response by shrub and tree species that are favored by snowshoe hare." (LCAS, Project planning – guideline 1)

Same comment(s) as above regarding burning prescriptions.

"Consider the need for pre-treatment of fuels before conduction management ignitions." (LCAS, Project planning – guideline 3)

We have regarding use of grapple piling of both heavy and fine fuels (in different piles) in some of proposed harvest units to both concentrate them (minimize acres needing burning) and providing for future denning structure by not burning many of the piles when they are adjacent to existing Forage Habitat.

Conservation Measures and Forest/Backcountry Roads and Trails

"On Federal lands in lynx habitat, allow no net increase in groomed or designated over-the-snow routes and snowmobile play areas by LAU." (LCAS, Programmatic planning – standard 1)

None are proposed, or planned, in the delineated lynx habitat portion of the analysis area.

"Determine where high road densities (>2 miles per square mile) coincide with lynx habitat, and prioritize roads or seasonal restrictions or reclamation in those areas." (LCAS, Programmatic planning – guideline 1)

With existing road closures and proposed road obliterations, road density would be well below the 2 miles of open road per square mile density in the analysis area's delineated lynx habitat area. With the Asotin LAU, because a large portion of it is in Wilderness and/or Roadless area, open road density is well below 2 miles per square mile.

Alternative-B Modified– Summary of Specific Features

Restoration/Enhancement Projects	
In-channel and stream restoration projects (rip rap and boulder placements)	Yes
Placement of Grouse/turkey cisterns	Yes
Aspen habitat restoration	Yes
Dispersed campground development	Yes
Pond reconstruction	Yes
Placement of bat boxes	Yes
Control and prevent noxious weeds	Yes
Plant native hardwoods, shrubs, forbs, and grasses	Yes
Roads (miles)	
Road obliteration	22.67
Road reconstruction	11.50
Temporary road const. (obliterated subsequent to use)	5.23
Fuel treatments (outside harvest units)	
Fire Prescription RXF – acres	1355
Fire Prescription THRXF – acres	346
Fire Prescription FYRXF – acres	56
Fuel treatments (inside harvest units)	
Fire Prescription CMRXF – acres	2265
Fire Prescription HJP – acres	506
Fire Prescription LTRXF – acres	322
Vegetation Treatments – Commercial Harvest	
Thinning from Below HITH – acres	717
Uneven-aged Management HSEI – acres	2102
Shelterwood Group Selection HSSW – acres	362
Vegetation Treatments – Non-Commercial	
Pre-commercially thinned PCT – acres	765
Plant native tree seral species – acres	1200
Logging Methods	
Helicopter – acres	682
Skyline – acres	976
Tractor – acres	1523
Volume of timber commercially harvested	
Million Board Feet – MMBF/Hundred Cubic Feet – CCF	13.9/25,961

Upper Charley Water Quality/Fish Monitoring Elements

In addition to the monitoring of water quality Best Management Practices (BMPs) during project implementation, the following water quality/fish monitoring elements will be incorporated:

- Monitor turbidity in Charley Creek during harvest and road reconstruction activity. Baseline data has been collected previously, and sampler will be reactivated in Spring 2001. Data collection will continue for at least one year after project activity completion. Samples will be sent monthly to the Umatilla Water Quality Lab. Data will be analyzed annually.
  - **Responsible for Monitoring:** Zone Hydrologist and Forest Technician-

- Turbidity will be monitored above and below instream project activities during implementation. Permits for instream work will be acquired from the Washington Department of Fish and Wildlife for instream work. Implementation will occur during the working window July 15 – August 30, as established by the regulation agency.
  - **Responsible for Monitoring:** District Fish Biologist and/or Zone Hydrologist

- While doing implementation and effectiveness monitoring, if a detection of increased turbidity of 5 NTUs above background (Washington State Water Quality Standard) is measured, an investigation will be implemented to identify the source. Upon discovery of the source, immediate action will be taken to correct the increase in sediment transport. Changes that have to be made will be based on a site-specific plan to correct the situation (i.e. failed waterbar in unit will be replaced, grass will be reseeded, matting will be placed to slow erosion, etc.).
  - **Responsible for Monitoring**: Fish /Water Quality personnel, Sale Administrator, Fire Management Officer, Engineering Technician, and Silvicultural Technicians

- Increases in water temperature are not anticipated because of the incorporation of PACFISH buffers, however, ongoing baseline water temperature monitoring will continue.
  - **Responsible for Monitoring**: Fish and Water Quality personnel

- Annually* Wolman Pebble Counts will be used to monitor substrate composition, including surface fine, at established locations in the representative reach.
  - **Responsible for Monitoring:** Fish and Water Quality personnel

- Fish habitat data will continue to be collected annually* in the portion of the "representative reach" which will undergo instream habitat improvements, i.e. boulder and/or wood supplementation.

- **Responsibility for Monitoring:** Fish personnel

► A new "representative reach" upstream of the established "representative reach" will be set-up the same year that installation of instream boulders begins in the established "representative reach". Data will be collected in the new "representative reach" annually* to monitor habitat trends in unimproved reaches similar in morphology and stream flow to the project reach.

- **Responsible for Monitoring**: Fish Biologist

► Pre-project photo monitoring will be conducted at instream project sites prior to implementation. Post-project photo monitoring at instream project sites will be conducted annually for three years, and periodically thereafter. This will be done to visually track habitat related changes in channel morphology and slope stability.

- **Responsible for Monitoring:** Fish Biologist

* Annually – on a yearly basis during the contract period of any vegetative removing activity (i.e. commercial timber sale).

INTRODUCTION

The following summary is a brief overview of the Upper Charley Ecosystem Restoration Projects Draft Environmental Impact Statement (DEIS). A description of the project area, purpose and need, public involvement, issues and concerns, proposed alternatives, and comparison of alternatives are briefly described in this summary. Additional information is available in the complete DEIS, and in the project analysis file (retained at the Pomeroy Ranger District office).

The Upper Charley subwatershed (hereafter referred to as the Upper Charley analysis area) is located on the Pomeroy Ranger District of the Umatilla National Forest. The objective of the Upper Charley planning effort was to implement ecosystem restoration projects to promote healthy and sustainable watershed conditions, and implement management direction described in the Land and Resource Management Plan (Forest Plan) for the Umatilla National Forest.

Five alternatives were evaluated in detail and presented in this DEIS. All action alternatives were designed to implement the goals and objectives addressed in the Forest Plan.

LOCATION AND GEOGRAPHIC BOUNDARIES

The Upper Charley analysis area is located in Garfield County, Washington, encompassing a gross area of approximately 7,650 acres. It is within the boundary of the Upper Charley subwatershed, located within the Asotin Creek Watershed.

The Upper Charley analysis area includes all or portions of Sections 11-14, 22-28, and 33-36 of T.9N., R.42E., Sections 8, 17-19, and 30 of T.9N., R.43E., and Sections 3 and 4 of T.8N., R.42E., W. M. surveyed. All proposed activities for this project are outside the boundaries of any roadless or wilderness areas. Map I-1 located in Chapter I displays the location of the Upper Charley analysis area.

PURPOSE AND NEED

Findings from the Asotin Watershed Assessment indicate that past fire suppression, selective harvest, and recent drought conditions have contributed to the degradation of forest ecosystem sustainability in the watershed. These past practices and conditions have transformed forest stand structure, tree species composition, and tree stocking levels of forest stands in the watershed to non-historic levels and have contributed to increased fuel loading.

The purpose of this project is to develop and analyze a mix of actions that respond to needs and recommendations identified in the Asotin Watershed Assessment and by the Interdisciplinary Team (ID Team) who surveyed and analyzed the area. The need for action in the Upper Charley analysis area emphasizes implementation of ecosystem management projects to promote healthy watershed conditions. Long-term vegetation management, wildlife improvements, and maintenance or improvements to the sustainability of fish habitat are also needed to improve watershed conditions.

The interpretation of ecosystem based management for this proposal is defined as *scientifically based land and resource management that integrates ecological capabilities with social values and economic relationships, to produce, restore, or sustain ecosystem sustainability and desired future conditions, uses, products, values, and services over the long-term.*

As a result of the conditions that contributed to degradation of forest ecosystem sustainability in the watershed there is a need to:

1. Reduce tree stocking densities and begin the reestablishment of vegetative composition to those more similar to their historic range (100 years before present condition) to promote the sustainability and vitality of current and future stands, and be consistent with long-term disturbance processes.

2. Reduce fuel accumulations to help control potential wildfire, reestablish fire as an ecological process across the landscape, enhance wildlife habitat, and begin restoring warm/dry forest ecosystems.

3. Reduce overland sediment flow, obliterate roads no longer used or needed, reduce overall road density, and improve the hydrologic function of existing system roads.

4. Implement water quality, fish habitat, wildlife, and recreation restoration/enhancement projects to contribute to ecosystem sustainability of the watershed.

5. Provide economic and quality of life opportunities for the local population consistent with the Forest Plan.

PUBLIC INVOLVEMENT

Comments on the proposed action from Federal, State, and local government agencies, as well as the general public were accepted following publication of a Notice of Intent to prepare an Environmental Impact Statement in the Federal Register, August 25, 1998. Comments were also solicited through scoping letters to interested individuals and organizations (August 24, 1998); public open house meeting (September 29, 1999); and by listing the proposed project in several quarterly issues of the Umatilla National Forest's Schedule of Proposed Actions (SOPA). A meeting to discuss the proposed project was held with Nez Perce tribal representatives on March 23, 1999.

KEY ISSUES

Key Issue 1 –Effects of the proposed activities on ecosystem sustainability.

Ecosystem sustainability for this project is defined as *the ability to sustain diversity, productivity, health, renewability, the capability of withstanding stress, and/or the ability to sustain yields of desired values, resources, uses, products, or services from an ecosystem while maintaining the integrity of the ecosystem over time (*Jensen and Bourgeron, 1993).

Ecosystem sustainability refers to the condition of the forest based on the landscape potential, the existing flora and fauna, and how the potential is maintained over time and space. Stand vigor is a measure of a stand's capability to resist forest pests. A healthy vigorous stand is much less susceptible to attack by insects and disease than are overstocked stands. Historical composition of stands is considered to represent sustainable conditions.

Past management practices and past timber harvests have altered successional patterns and created "unnatural" stands and forest conditions. It is estimated that approximately 58% percent (4015 acres) of

forested area within the Upper Charley analysis area is overstocked. Full stocking occurs when a stand has developed dominant, codominant, and suppressed crown classes. Stands in the Upper Charley area are experiencing mortality in the intermediate and suppressed classes due to competition for growing space, water, and nutrients. Mortality is also occurring in the dominant class from insect and diseases, which attack the larger trees in a stand when the competition for resources and growing space is significant.

Fire exclusion in the Upper Charley analysis area has permitted the ingrowth of late seral species and has resulted in domination of dense forest stands by shade-tolerant species. Too many trees, too much fuel on the ground, and more continuous stands have made the Upper Charley analysis area no longer crown-fire safe.

Key Issue 2 –Effects of proposed activities on big game habitat.

Most of the Upper Charley analysis area is used as elk summer range. Any change in vegetation, whether it occurs gradually, as trees grow older and grasses change, or abruptly as a result of fire, timber harvest, or other disturbance effects big game habitat. Road obliteration and closures can change the forest by affecting the movement of big game species within their habitat.

There is controversy among forest users that management activities such as, planned timber harvest, prescribed burning, and road closures help sustain big game habitat. Others believe big game habitat is adversely effected by implementing activities such as planned timber harvest and prescribed burning, which they feel result in changes to elk cover conditions and elk vulnerability. They also believe having too many roads opened to the public adversely effects elk habitat.

Public comment letters received during the scoping phase of the project expressed concern with loss of cover in general, and specifically with loss of Satisfactory cover. Concerns were brought out about increased big game vulnerability, and using calving and winter closures as a tool for reducing big game vulnerability. We received comments requesting that we reduce road densities as a means to improve big game habitat.

Key Issue 3 –Effects of the proposed activities on water quality and fish habitat.

Water quality and fish habitat are key resources in maintaining ecosystem sustainability and contributing to watershed restoration. Forest management activities may affect water quality, quantity, and time of flows through alternation of soil, site characteristics, and other conditions (Forest Plan FEIS IV-17). Primary physical stream and riparian characteristics and fish habitat properties capable of being affected by management activities are streamside vegetation and water temperature; sediment and turbidity; and stream geomorphology featuring instream woody material and streambank stability (Forest Plan FEIS IV-105).

The Upper Charley analysis area does not contain any listed threatened or endangered aquatic species, but the Asotin Creek Watershed does have species and habitat for Snake River spring/summer and fall chinook salmon, Snake River steelhead, and bull trout. These aquatic species are all federally listed as threatened species by the National Marine Fisheries Service (NMFS) and/or U. S. Fish and Wildlife Service. The Asotin Creek Watershed is identified as “High Priority” for restoration by NMFS for listed fish stocks utilizing the watershed.

Although the public did not present any specific concerns about water quality and fish habitat, the ID Team recognized the importance of protecting and enhancing existing aquatic habitat within the watershed. Therefore, the effects of the proposed activities on water quality and fish habitat were considered a key issue.

Key Issue 4 –Effects of the proposed activities on road management.

Most recreation that occurs in the Upper Charley analysis area is dispersed recreation. The most common activities are hunting, camping, sightseeing, mushroom picking, horseback riding, snowmobiling, hiking, etc. With such a variety of forest users there are differences of opinion on the amount of access that should be available in the area. Some hunters want more motorized access for easier hunting and less work in retrieving downed game. Other hunters want more road closures and less access to allow more walk-in hunting opportunities. Besides hunters, some forest users want motorized access for activities such as, firewood cutting, berry picking, or just pleasure driving. While others want the solitude afforded by less motorized access to pursue non-motorized dispersed recreational activities like hiking, horseback riding, nature observance, and photography.

In addition to the concerns and opinions of recreationists, the ID Team also considered the presence of habitat for listed Threatened, Endangered and Sensitive aquatic species in the Asotin Creek Watershed an important element in analyzing road management. Any road obliteration or reconstruction to improve drainage and sedimentation would have a favorable effect on aquatic species.

OTHER ISSUES

In addition to the key issues, other issues were identified during the scoping process. These "other" or non-key issues are generally of high interest of concern to the public, or are necessary to understand the full extent of the alternative. The following non-key issues are discussed in Chapters III and IV in the DEIS:

- **Soil Resources -** Using ground based equipment and removing or burning trees (including high intensity wildfire) and down woody material can affect the productivity of the forest by compacting soils and the possible loss of soils by erosion.
- **Range Conditions -** Pastures in the Peola Cattle and Horse Allotment are located within the Upper Charley analysis area. Currently 317 cow/calf pairs graze there on a rest-rotation basis. Management activities may affect various rangeland characteristics and resources including vegetative composition and condition, forage production, and potential and actual use by grazing animals.
- **Noxious Weeds -** Proposed project work of timber harvest, fuel reductions, wildlife movements, road reconstruction, and recreations use all have the potential to spread noxious weeds in the Upper Charley analysis area. Most noxious weed species found in the Umatilla National Forest thrive in full sunlight and disturbed soils. To become established in an area, noxious weed species need disturbed soils where native species or ground vegetation has been diminished or displaced.
- **Management Indicator Species -** Proposed project activities can affect several habitat types in the Upper Charley analysis area. The Forest Plan has selected seven fish and wildlife indicator species to represent animals associated with the major habitat types on the Forest. Habitat requirements of the selected indicator species are presumed to represent those of a larger group of wildlife species. Habitat conditions for management indicator species, as well as other wildlife on the Forest, will be managed to maintain viable populations (36 CFR 219.19).
- **Proposed and Listed Threatened, Endangered, and Sensitive Species -** Aquatic, terrestrial and plant species and their habitat could be affected by proposed management activities.

- **Recreation -** The Upper Charley analysis area is popular as a dispersed recreation area. Proposed project activities could have short-term and long-term effects on recreational use.
- **Non- Traditional Economic Factors - Qualitative Resources -** Some members of the public have requested an economic analysis of non-commodity resources as an additional comparison of alternatives.

ALTERNATIVES CONSIDERED IN DETAIL

Alternative A – No Action

The "No Action" alternative is required by NEPA. In this alternative "no action" means that the proposed project (which includes all activities identified in the proposed action) would not take place at this time. This alternative serves as a baseline to compare the differences and effects of the proposed action alternatives.

If Alternative A is selected current management practices taking place in the area would still continue, but no new activities would take place. Only those management activities considered part of the normal maintenance requirements, or those allowed under previous decision documents would continue. Current activities such as, motorized access travel management, road maintenance, dispersed recreation, noxious weed management, fire protection, and livestock grazing would be allowed to continue as they now take place in the project area.

Alternative B – Proposed Action – Preferred Alternative

Alternative B, the proposed action identified in scoping, is the preferred alternative in this DEIS. Alternative B is designed to implement ecosystem based management throughout the Upper Charley subwatershed.

Alternative B is designed to treat a larger area than has been done in the past, and balance the ecological and socioeconomic aspects of the Forest Service mission statement "to care for the land and serve the people." Silvicultural treatments include: 2293 acres of Uneven-aged Management; 781 acres of Thinning from Below; 492 acres of Shelterwood Group Selection; and 938 acres of Pre-commercial Thinning. These treatments are intended to manage the area to allow for a longer rotation cycle (approximately 20 years) between planned timber harvest and any future harvest in this area, and improve the cumulative health of the landscape area. Alternative B is intended to respond to the need to reduce tree stocking levels to more historic levels in order to improve the growth and vigor of stands, reduce levels of shade tolerant species and encourage the return of historic seral species, and remove disease and insect infested trees.

A variety of prescribed fire treatments are proposed on a landscape basis (5,235 acres), both in areas treated with timber harvest and in areas where no timber harvest is planned. The objectives of prescribed fire for the Upper Charley analysis area are to: (1) treat overstocked stands to begin the change to long-term desired stocking levels; (2) begin changing species composition to reflect a majority of fire and pest resistant trees; (3) create naturally shaped openings; (4) create a mosaic of burned and unburned patches; (5) reduce ground fuel accumulations and begin to reduce ladder fuels; (6) maintain and promote effective ground cover; and (7) increase area coverage of desired grasses and forbs.

Road obliteration (22.67 miles) and road reconstruction (18.10 miles) are designed to reduce road densities, limit overland sediment flow, and improve hydrologic function. Alternative B would construct 5.23 miles of temporary access roads and then obliterated them subsequent to use.

Alternative B would incorporate the following restoration/enhancement projects that were either identified as opportunities in the Asotin Watershed Assessment or by the ID team for the Upper Charley analysis area:

- In-channel and stream restoration projects (log weirs, rip rap, and boulder placement)
- Placement of grouse/turkey cisterns
- Aspen habitat restoration
- Dispersed campground development
- Pond reconstruction
- Placement of bat boxes
- Control and prevention of noxious weeds
- Plant native hardwoods, shrubs, forbs, and grasses

Alternative B would commercially harvest an estimated 18.9 MMBF or 35,790 CCF of timber.

Alternative C – Big Game Habitat

Alternative C focuses on enhancing and improving big game habitat in the Upper Charley analysis area while working under an ecosystem management framework. Alternative C is designed to emphasize the amount of forage and cover available, the quality of cover present, and the spatial arrangement of both forage areas and total cover after project implementation.

Alternative C would eliminate forage deficient areas (areas defined as any total cover farther away than 600 feet from the defined forage:cover edge) by buffering all forage and cover areas with a 600-foot optimum distance between areas. In Alternative C the arrangement of harvest units and selection of silvicultural prescriptions area designed to eliminate forage deficient areas. Silvicultural treatments include: 975 acres Uneven-aged Management; 488 acres of Thinning from Below; 442 acres of Shelterwood Group Selection; and 938 acres of Pre-commercial Thinning.

Prescribed fire treatments (5,256 acres) are similar to Alternative B and are designed to reduce fuel accumulations and reestablish fire as an ecological process across the landscape. In prescribed fire areas where no prior harvest activities will take place, fire treatments are intended to maintain existing cover conditions.

Proposed road obliteration (22.67 miles) and reconstruction activities (13.66 miles) are similar to Alternative B, with the exception of placing a seasonal elk calving closure on Road 4206 closing it annually from 12/1 to 6/30. Approximately 1.70 miles of temporary road access would be constructed then obliterated subsequent to use.

Alternative C would implement all of the restoration/enhancement projects identified in Alternative B.

Alternative C would commercially harvest an estimated 11.5 MMBF or 21,569 CCF of timber.

Alternative D – Restoration without Commercial Timber Harvest

Alternative D is designed to implement ecosystem based restoration projects excluding commercial timber harvest. Alternative D is intended to provide a contrast between environmental effects and outputs of ecosystem restoration without commercial timber harvest.

Alternative D would implement Pre-Commercial Thinning (938 acres) and planting of native tree seral species. No commercial harvest would take place. Therefore, only prescribed fire treatments (5,245

acres), including mechanical thinning, would be used to begin changing overstocked stands to long-term desired stocking levels, and begin the process of changing tree species composition to reflect a majority of fire and pest resistant trees. Prescribed fire would be used to: (1) ensure long-term forest health and ecosystem sustainability; and (2) manage fuel accumulations to help control wildfires and reestablish fire as an ecological process across the landscape.

Reduction of road densities and overland sediment flow would be accomplished with road obliteration (22.67 miles). Road reconstruction projects (18.10 miles) to remove and replace degraded culverts, and improve road surface conditions would take place. Approximately 3.34 miles of temporary road access would be constructed then obliterated subsequent to use.

Alternative D would implement the same restoration/enhancement projects identified in Alternative B.

Alternative E – Management Activities in Class IV Riparian Habitat Conservation Areas (RHCAs)

Alternative E is designed to respond to the need to begin restoring ecosystem sustainability on a larger scale than has been done in the past, and respond to recommendations made in the Asotin Watershed Assessment to begin managing the outer 50% of RHCAs to meet other resource objectives in the watershed. Alternative E is very similar to Alternative B with the exception that timber and prescribed fire activities are proposed to take place on 133 acres of Class IV RHCAs. Class IV Streams are defined as *seasonally flowing or intermittent streams.* Class IV Streams currently have a PACFISH imposed non-management buffer of 100 feet slope distance from each side of the stream.

Riparian areas have the potential of growing large quantities of vegetation quickly. They also accumulate large quantities of fuel materials, thereby posing a greater risk of catastrophic damage and a greater fire hazard risk to the subwatershed. Past wildfire activity in RHCAs revealed how damaging wildfire has been to these areas due to high fuel concentrations. Alternative E is intended as an opportunity to review and analyze the effects of incorporating timber and fire management activities in Class IV RHCAs in the Upper Charley analysis area. Implementation of proposed activities in Class IV RHCAs would meet the following conditions:

- Stream shading would not be reduced.
- Large woody debris frequencies would be above Riparian Management Objectives (RMOs).
- Only single tree removal would be allowed.
- No ground based harvest equipment would be allowed in the RHCA.

Approximately 2,293 acres would be treated with Uneven-aged Management; 886 acres with Thinning from Below; 520 acres with Shelterwood Group Selection; and 938 acres with Pre-commercial Thinning.

Prescribed fire and fuel treatments (5,371 acres) are designed to reduce the risk of catastrophic fire, reestablish fire as an ecological process across the landscape, and begin the change in tree species composition to reflect a majority of fire and pest resistant trees.

Road obliteration projects (22.67 miles) and restoration projects (18.10 miles) are the same as identified in Alternative B. Approximately 5.23 miles of temporary road access would be constructed then obliterated subsequent to use.

Alternative E would commercially harvest approximately 19.4 MMBF or 36, 813 CCF of timber.

Please refer to Chapter II for a more detailed discussion on each individual alternative.

The following tables (S-1 and S-2) show a comparison of alternatives by design with specific features, and by key issues.

Response to Comments

Karen Coulter – Blue Mountain Biodiversity Project:

Response to Comment 1 - We will make note of your support for Alternative D.

Response to Comment 2 – Landscape prescribed fire would generally occur in the fall of the year. In grass areas, burning may occur in late winter/early spring. Underburns will take place during cool moist conditions and could occur in spring as well as late fall (EIS page II-8). Proper weather conditions are the driving factor when implementing prescribed burning rather than just during certain seasons. Mitigation for protection of soil during burning is also discussed in the EIS on page II-32. Each prescribed burn will have a "burn plan" that will contain detailed information on operations and plans for protecting resources in the area. "Burn plans" are approved by, all District resource area staff managers, the District Ranger, and resource staff managers in the Supervisor's office prior to ignition.

Response to Comment 3 –The Fish biologist's report states that restoration projects of in-channel placement of rocks and boulders would increase habitat diversity, and that cumulatively, overall riparian and in-stream aquatic conditions would provide for more spawning and rearing habitat and more stable fish populations (EIS pages IV-42 & 43).

We agree that the general habitat type on the Heppner District would not be well suited to weirs and boulder placements. However, in our Rosgen Type A channels (deep V canyon) boulders and weirs have shown to be positive for fish habitat. Stream temperature is not a concern in these locations because the existing canopy closure almost completely shades the stream. Table III-6 located on page III-10 of the EIS lists the 7-Day Average Maximum Stream Temperature for Charley Creek. Results of stream temperature monitoring documents that Charley Creek has been below the PACFISH maximum stream temperature indicator of 64 degrees F since 1992 when record keeping was established.

Response to Comment 4 – There are two decadent aspen stands within the project area, each covering about one acre. The stands in each area will be included in natural and fuel activity burn areas. They will be treated with fire to kill the overstory and stimulate regeneration of suckers. After the first treatment, the clones will be protected from grazing for approximately 5 years either with a buck and pole fence, or with some other type of barrier to grazing. When the clones reach a height where foliage can be maintained above the grazing level, they will be considered sustainable without protection.

Response to Comment 5 – Since 1995, the District has been operating under a Forest Noxious Weed EA, which specifies prevention strategies and treatment options for inventoried noxious weed sites. Allowed treatment tools include manual, chemical, mechanical, and biological control methods. Treatments of sites not included in the Forest Noxious Weed EA are currently limited to manual methods (hand-pulling). We are limited to manual methods in the Upper Charley analysis area. A list of strategies to control and prevent noxious weeds in the Upper Charley analysis area can be found in the EIS on page II-33.

Response to Comment 6 – A report entitled *Upper Charley Prescribed Fire and Fuel Treatment Projects* (EIS page II-8) located in the analysis file contains information on: specific fuel treatments and prescription descriptions for each fuels unit; prescription parameters, weather conditions, operational procedures, containment procedures, and contingency plans. A more comprehensive "burn plan" will be

written for each specific burn unit and will contain descriptions of specific operations that will occur during project implementation.

State and federal air quality regulations will be followed during all prescribed burning. Washington State Department of Natural Resources will approve burning on a daily basis (EIS page IV-18). Air quality will often be the limiting factor in determining how many acres will be burned each day. Project areas will be subdivided into small burn blocks. These burn blocks will be used to manage the amount of smoke produced on a daily basis. Any aerial ignition will be carefully implemented and closely monitored to stay within "burn plan" parameters.

We are not using prescribed fire as a "blanket prescription." Many different kinds of prescribed fuel treatments will be used throughout the Upper Charley analysis area. This area has experienced extensive fire suppression in the past. The type of treatment to be used is dependent upon the kind of vegetation in the area, existing down fuel loadings, topography, aspect, overstory, fuel types, and resources that could be affected by prescribed fire. Wildfire would be catastrophic at this time with present existing fuel loads and their configurations in the area. Please see pages II 40-41 in the EIS for a complete listing and description of all prescribed fuel treatments to be used.

Response to Comment 7 – The road reconstruction work planned in the Upper Charley analysis area is designed to improve the hydrologic function of existing roads. Reconstruction work consists mainly of stabilizing road surfaces by replacing surfacing, stabilizing cut and fill slopes with grasses and shrubs, and removing degraded culverts (EIS page II-6). These actions follow PACFISH standard RF-3a - *Avoid adverse effects on listed anadromous fish by reconstruction of road and drainage features that do no meet design criteria or operation and maintenance standards, or that have shown to be less effective than designed for controlling sediment delivery….*

No new system roads will be constructed for this project.

Washington State Department of Fish and Wildlife:

Response to Comment 1 - It is not uncommon for a decision maker to modify an alternative when a final decision is made. I reviewed the comments received after the Draft EIS was published regarding the level of Satisfactory Cover remaining in the area after project implementation. Incorporating recommendations from the Zone Wildlife Biologist, I have decided to defer approximately 385 acres (19 units) of Satisfactory Cover from harvest and prescribed burning at this time. I have modified Alternative B to reflect this change. Appendix B of the Record of Decision lists the specific units that will not be included in my decision. With this change, the level of Satisfactory Cover remaining in the Upper Charley analysis area is above the Forest Plan standard of 10%.

Response to Comment 2 – The Upper Charley analysis area was analyzed in the Pomeroy District's 1993 Motorized Access and Travel Management Plan (ATM Plan). The ATM Plan was designed to have a balance between resource protection and allowing adequate public motorized use of the area. The Upper Charley area is included in Strategy Areas #6 and #7 of the ATM Plan. Strategy Area #6 was described as receiving the heaviest dispersed recreation on the district.

A little less than half of the roads in the Upper Charley analysis area (25.14 miles) are closed year round to all motorized traffic except for snowmobiles, and 4.90 miles are closed year round to all motorized traffic. The eastern portion of the Upper Charley analysis area (Mud Springs Ridge) is within an area

designated as seasonal Winter Range by the Pomeroy Motorized Access Travel Management Plan. This designation closes the area to motor vehicles annually from December 1 through March 31. The Pomeroy Ranger District has responded to the decline in elk population in this area in a recent NEPA document. In the Decision Notice for the Lick Timber Sale and Fire Introduction Project – September 9, 1998, the District assigned an Elk Calving Seasonal Closure to Road 4206100 and all connecting system roads in this area. This closure prohibits motorized traffic annually from April 1 through June 30. Therefore, this area (5.65. miles) will be closed annually from December 1 through June 30 (EIS- page III-27) to help limit disturbances during elk calving.

All of the action alternatives reduce existing open road density. Alternatives B, B-Modified, D, and E reduce it from 2.17 mi./sq. mi. to 2.12 mi./sq. mi., and Alternative C reduces it to 1.57 mi./sq. mi. Implementation of any of the action alternatives would be moving in the direction of attaining the Forest Plan desired condition of approximately 2.0 miles per square mile of open road density (FP 4-11). On the ground, the 0.12 mi./sq. mi. above the Forest Plan desired condition equates to only 0.63 miles of road.

All action alternatives propose to obliterate 22.67 miles of road no longer needed for management activity.

Additionally, the use of prescribed fire along with aggressive vegetation manipulation would significantly increase forage habitat that is thought to be lacking in the Upper Charley analysis area. Although predation is a major factor in elk calf survival, improvements in habitat conditions would permit healthier forage, resulting in better biological conditions for cow elk.

In my decision I had to consider the concerns of a variety of users. I wanted to maintain a road system that will permit adequate access to the area in the future, for both resource management and for recreational enjoyment.

Response to Comment 3 – As noted in Response to Comment 1, Alternative B has been modified to defer harvest and prescribed burning on 385 acres of Satisfactory Cover. The level of Satisfactory Cover remaining will be above Forest Plan standards of 10%.

In the Upper Charley analysis area the elk habitat effectiveness indicator (HEI) was calculated using the following attributes: size and spacing of cover; quality of cover; and density of roads traveled by vehicle. Although Alternative C would provide the highest elk HEI (75.1) because of selective location of harvest units to eliminate forage deficient areas, Alternatives B-Modified (67.5), D (70.1), and E (65.3) would also exceed the minimum HEI level of 45 as designated by the Forest Plan for management area E2 – Timber and Big game (EIS table IV-12 - page IV-36).

Response to Comment 4 – Although Washington Department of Fish and Wildlife (WDF&W) survey numbers are not evident in the EIS, references to the presence of Snake River Steelhead are made (EIS pages III-32 & 33). The Biological Assessment, which is part of the analysis file, contains a table that displays the results of September spawning ground surveys for steelhead by the WDF&W within the Asotin Creek watershed since 1986 (Schuck, Viola and Keller 1997). This table displays the total redds/mile surveyed in the North Fork Asotin Creek, South Fork Asotin Creek, and Charley Creek. The surveys are from 1986 to 1997.

Recent Forest Service stream surveys, conducted from the mouth to the headwaters of Asotin Creek, show habitat changes and physical barriers (i.e. beaver dams) probably restrict steelhead access to the lower portion of Forest Service lands. Conversations with Glen Mendel, WDF&W District Fish

Management Biologist and District Fish Biologist Del Groat, have verified this probability. Although the habitat may be suitable it is not likely being used.

In the Biological Evaluation for the Upper Charley analysis area the determination of effects for Snake River Steelhead and Bull Trout for all action alternatives was given a "May Effect Not Likely to Adversely Affect." The Biological Evaluation and the Biological Assessment were reviewed by the governing agencies and letters of concurrence are on file.

Response to Comment 5 – At this time, with this NEPA document, there is no plan to change the designation of use for Trail #3125-North Fork Asotin Trail. This trail is one of the first trails open in the spring, but is closed annually to motorized traffic, April 1 to June 30, because of elk calving taking place in the area. The trail is currently maintained for foot, horse, OHV, and mountain bike enthusiasts. We have no plans at this time to encourage more OHV use by reconstructing the trail, and we believe the Steven's Ridge ATV/OHV use area will actually decrease potential OHV operation in this area.

Environmental Protection Agency

Response to Comment 1 -Chapter III under the heading Climate (EIS page III-3) identifies that the general area is located in the semi-arid rain shadow region east of the Cascade Mountains. This area features both maritime and continental climate patterns, with most of the weather patterns moving inland on cyclonic low-pressure fronts off the Pacific coast. Typical climate characteristics of the region are low precipitation totals and large temperature fluctuations between winter and summer.

Within the area that would be impacted by emissions of the Upper Charley prescribed fire projects, there are no specially designated airsheds or non-attainment areas. The nearest Class I airshed to the Upper Charley analysis area is located in the Eagle Cap Wilderness which is approximately 65 airmiles miles south of the project area. Our prevailing wind patterns are from the SW that pushes the smoke in the opposite direction. Prescribed fire activity in the Upper Charley analysis area would have no effect on this airshed.

The cites of Lewiston, Idaho and Clarkston, Washington are the largest population centers in the vicinity of the Pomeroy Ranger District and the Upper Charley analysis area. In fall and winter, stable air masses, which often occur concurrently with optimal environmental conditions for prescribed fire, tend to create temperature inversions and very little air movement in the Lewiston-Clarkston Valley. Our smoke production is strictly regulated by the Washington State Department of Natural Resources (DNR), in co-ordination with Washington State EPA as defined by the Washington State Clean Air Act.

The Pomeroy Ranger District fire and fuels management and the smoke management meteorologist from the DNR are keenly aware of the air quality situation of the Lewiston-Clarkston valley and the potential influence that burning within the Asotin Creek Watershed may have on this area. In response to this situation the Pomeroy Ranger District and the smoke management meteorologist from the DNR have developed a close working relationship with the Lewis Clark Air Quality Advisory Commission. We meet with this group in advance of prescribed fire implementation to inform them of our prescribed fire plans including such information as project location, fuel types, and planned time of ignition. We remain in constant communication with leaders of this group throughout project implementation. They help monitor, if and when, our smoke emissions impact the air within the Lewiston-Clarkston Valley.

Although there is no official ambient air quality monitoring data for the Lewiston-Clarkston Valley, we do have a radiance nephalometer that is maintained by the Oregon Department of Environmental Quality in Asotin, Washington, which is at the mouth of Asotin Creek where it enters the Snake River. We are using the nephalometer to create baseline data for different seasons of the year, as well as to help us determine when smoke from prescribed fire projects within the Asotin Creek Watershed is reaching the Lewiston-Clarkston Valley.

Response to Comment 2 –All of the action alternatives are similar in the total amount of acres proposed for treatment with prescribed fire. The fuel treatments to be used for each unit are identified by alternative in the Fuel Treatment maps located after the narrative description of each alternative in Chapter II of the EIS.

Since air quality will often be the limiting factor in determining how many acres would be burned each day the District did not attempt to list out a schedule of acres to be burned each day by alternative. The number of acres and fuel type burned will be dependent on meeting air quality standards for that day. All burning will be done in accordance with the Washington State DNR Smoke Management Plan. Prescribed burning will have to be approved by the DNR's Smoke Management Meteorologist, who will determine if prescribed burning projects will meet smoke management guidelines using current and predicted air quality conditions and current forecasted weather conditions (EIS page IV-17). Air turbulence, variable heights, inversion depths, and smoke dispersion potential will all be considered in the smoke management burn approval process (EIS page IV-18). Project areas will be subdivided into small burn-blocks. These burn-blocks will be used to manage the amount of smoke produced on a daily basis. The Pomeroy District will get approval for burning on a daily basis from the Washington State DNR. The District is in contact with the DNR at all times during the prescribed burn, ready to stop the burn if indicated by DNR. Since burning will be managed on a daily basis, subject to changes because of air quality, the best representation of effects were indicated by using biophysical groups and fuel types.

The EIS (page IV-17) also lists that burning projects will not be approved if:

- Intrusion of smoke into sensitive areas such as population centers is likely.
- Any state or federal air quality regulations, laws, or rules would be violated.
- Another state's published air quality standards would knowingly be violated.
- Smoke would not be dispersed within approximately eight hours of ignition and fully dispersed by 12:00 p.m. of the next afternoon.

Response to Comment 3 - There is an error in the last paragraph on page IV-18 of the EIS that has been corrected in the errata sheet. The corrected statement should read "An analysis was performed of PM 10 particulate in major forest fuel types in the Upper Charley analysis area produced by different treatment methods including: (1) wildfire; (2) dry condition prescribed fire with no pre-treatment; (3) jackpot or cool, moist burning conditions after mechanical tree removal; and (4) dry condition prescribed fire following mechanical treatment and moist burning conditions. Therefore, the representation of Figure 4-1on page IV-19 is correct, but the original narrative was incorrect in listing five treatment methods.

Response to Comment 4– Please see Response to Comment 1 under Washington State Department of Fish and Wildlife

Response to Comment 5 – As stated in the EIS, for purposes of the aquatic analysis, the area of cumulative effects (analysis area) is considered from the Upper Charley area (project area) and includes the area downstream to the confluence of Asotin Creek to the Snake River, as required by Section 7 of the

Endangered Species Act. Therefore, the analysis area for effects goes beyond the Upper Charley subwatershed boundary (EIS page IV-39).

Although, Washington Department of Fish and Wildlife (WDF&W) survey numbers are not evident in the EIS, references to the presence of Snake River Steelhead is made (EIS pages III-32 & 33). The Biological Assessment, which is part of the analysis file, contains a table that displays the results of September spawning ground surveys for steelhead by the WDF&W within the Asotin Creek watershed since 1986 (Schuck, Viola and Keller 1997). This table displays the total redds/mile surveyed in the North Fork Asotin Creek, South Fork Asotin Creek, and Charley Creek. The surveys are from 1986 to 1997.

Recent Forest Service stream surveys, conducted from the mouth to the headwaters of Asotin Creek, show habitat changes and physical barriers (i.e. beaver dams) probably restrict steelhead access to the lower portion of Forest Service lands. Conversations with Glen Mendel, WDFW District Fish Management Biologist and District Fish Biologist Del Groat, have verified this probability. Although the habitat may be suitable it is not likely being used.

The District is currently working with the Asotin Model Watershed Team with planning and implementing projects in Charley Creek. This team consists of State and Federal agencies, and private landowners. Two representatives of the WDF&W, Glen Mendel and Steve Martin, are active participants in this group and are aware of the Forest Service's proposed actions in the Upper Charley analysis area. Our District Fish Biologist is a member of this team and our intent is to become a partner with the Asotin Model Watershed Team to have projects in this area (both on and off Forest land) compliment one another. We intend to use the "Wyden Authority" to use Federal funds outside of Forest boundaries to work with the Model Watershed Team.

In the Biological Evaluation for the Upper Charley analysis area the determination of effect for Snake River Steelhead and Bull Trout for all action alternatives was given a "May Effect Not Likely to Adversely Affect." The Biological Evaluation and Biological Assessment have been reviewed by the governing agencies and letters of concurrence are on file.

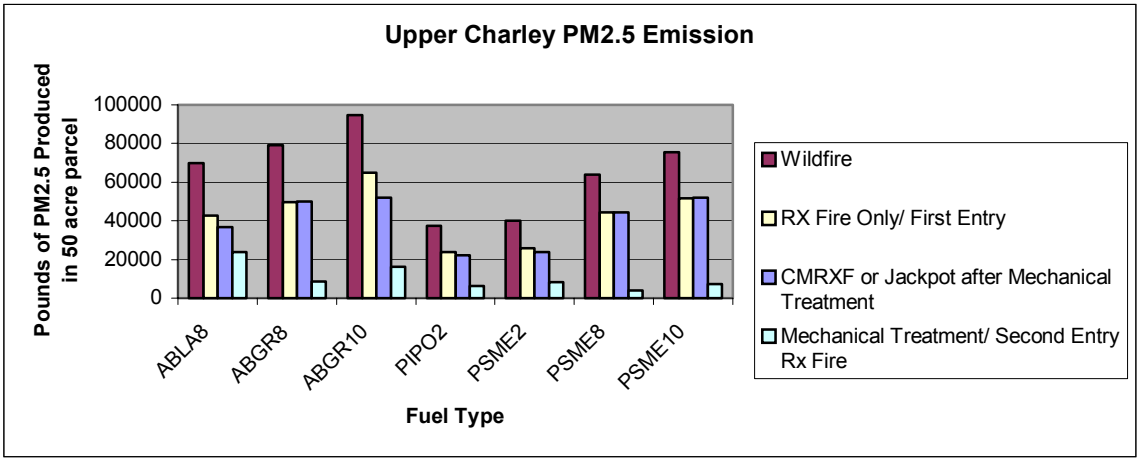
Response to Comment 6 — Please see Response to Comment 2 under the heading Washington State Department of Fish and Wildlife.

Division of Environmental Quality

Response to Comment 1 – Since there is a direct conversion from PM 10 (particulate matter smaller than 10 microns in diameter) emissions to PM 2.5 (particulate matter less than 2.5 microns in diameter) emissions only one set of emission numbers (PM10) was selected to be represented in the EIS Figure 4.1 on page IV-19.

Using PM2.5 emissions, Figure 4.1 would be represented as shown below.

This chart shows the difference in the amount of PM 2.5 produced from a 50-acre parcel of the major fuel types in the Upper Charley Analysis Area under different burning scenarios. The burning scenarios include: (1) wildfire, (2) cool moist prescribed fire (CMRXF) or jackpot burning following mechanical treatment, (3) prescribed fire only in dry conditions, and (4) second entry prescribed fire which is dry condition prescribed fire following mechanical tree removal and a previous cool, moist prescribed fire entry.

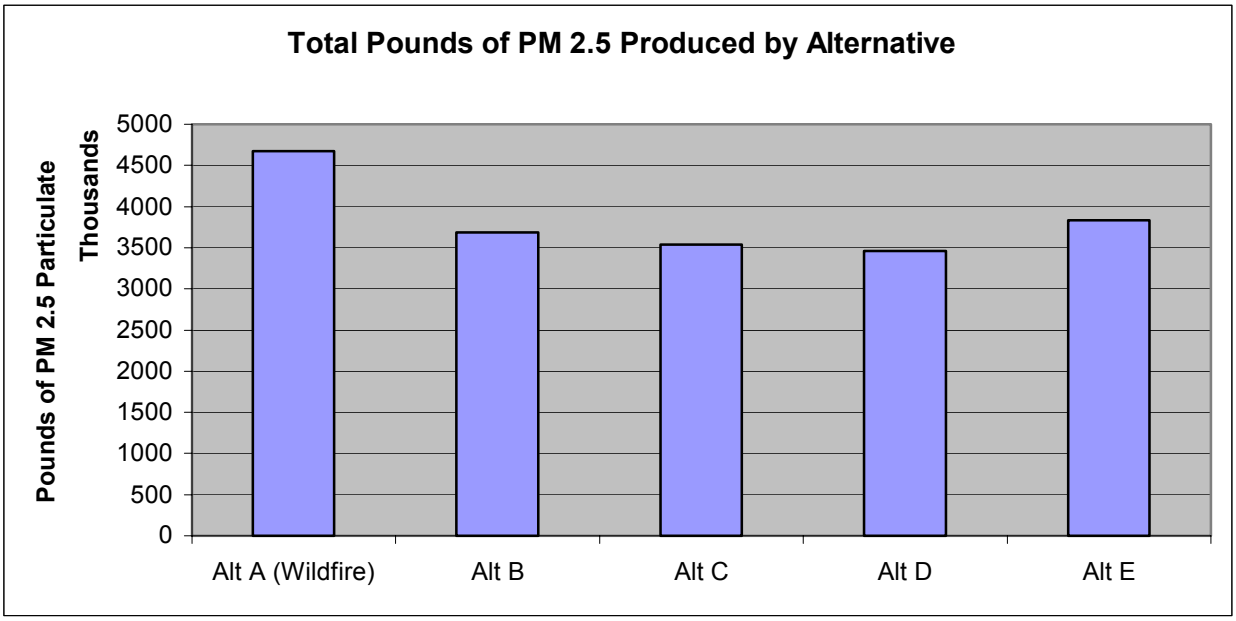


ABLA – Subalpine fir
ABGR – Grand fir
PIPO – Ponderosa Pine
PSME – Douglas fir

Fuel Model 2 – Open timber stands with grass. Fire spread is primarily through the fine herbaceous materials. Fires are surface fires where the herbaceous material, in addition to dead down stemwood from the timber overstory contributes to the fire intensity.

Fuel Model 8 – Closed timber stands with little surface fuel loading. Slow burning ground fires with low flame lengths.

Fuel Model 10 – Closed timber stands with moderate to heavy litter and surface fuel. Fires burn in surface ground fuels with greater intensity. Crowning out, spotting, and torching of individual trees are more frequent in this fuel situation.



Response to Comment 2 – There is an error in the last paragraph on page IV-18 of the DEIS that has been corrected in the errata sheet, it should read "An analysis was performed of PM 10 particulate in major forest fuel types in the Upper Charley analysis area produced by different treatment methods including: (1) wildfire; (2) dry condition prescribed fire with no pre-treatment; (3) jackpot or cool, moist burning conditions after mechanical tree removal; and (4) dry condition prescribed fire following mechanical treatment and moist burning conditions. Therefore the representation of Figure 4-1 in the EIS on page IV-19 is correct, but the narrative was incorrect in listing five treatment methods.

Response to Comment 3 – Please see Response to Comments 1 and 2 under the heading Environmental Protection Agency.

In addition, the EIS (page II-8) references that a report entitled *Upper Charley Prescribed Fire and Fuel Treatment Projects* located in the analysis file contains information on: specific fuel treatments, and prescription descriptions for each fuels unit; prescription parameters for landscape prescribed fire; operational procedures; containment procedures; contingency plans, and management measures to be applied to project implementation. At the time of implementation a comprehensive site-specific burn plan will also be completed for each prescribed burn.

ONRC

Response to Comment 1 –For all action alternatives using commercial timber harvest, approximately 20-35% of treated forest stands would retain undisturbed clusters of large trees (sound and cull) along with associated trees of all heights and diameter classes, snags, and down wood. Clusters will vary in size and shape from 0.1 to 3 acres in size. Individual trees and clusters will have more growing space and will begin to grow faster with the potential to become larger than at present stocking levels. The treatment will create a mosaic effect (EIS page IV-28).
The EIS on pages II-8 and 9 discusses in detail the silvicultural prescriptions to be used in Alternatives B, C, and E. The Thinning from Below prescription identifies "retaining healthy large individual trees, as well as groups of intermediate and large trees throughout each stand, and where possible, each acre would remain stocked with insect and disease resistant species." The Uneven-age Management prescription "would retain large healthy individual trees as well as groups of all sizes of the most pathogen resistant tree species throughout the stand." The Shelterwood Group Selection prescription also states "large healthy trees as well as groups of all sizes of trees resistant to pathogens will be retained throughout each treated stand."

Response to Comment 2 – The environmental impact statement for the Upper Charley analysis area was prepared according to direction in 40 CFR 1502.

Response to Comment 3 –Proposed activities in the Upper Charley analysis area will have no effect on roadless areas. All proposed activities are outside the boundaries of any roadless or wilderness areas, and are not located in areas that would be considered as an addition to a roadless area (EIS Chapter I page 1).

Response to Comment 4 – Numerous snag transects have been taken in the Upper Charley area in the past 2-3 years, and extensive field reconnaissance of the area was completed during the summer of 1998. Based on these surveys and reviews the Upper Charley area as a whole contains snags of all sizes and species in abundance. The levels are significantly above what is specified in the Forest Plan Screens amendment as minimum management levels (EIS page IV-37). Table III-15 on page III-29 of the EIS

identifies snags by class size and number/acre. Snag habitat inventories in harvest areas will also be taken. The Marking Guide (analysis file) used for the Upper Charley EIS identifies the number of snags by size and biophysical group that will be retained on a per acre basis.

Response to Comment 5 – Following the "Screens" amendment to the Forest Plan, the EIS states (page II-34) that snags and green replacement trees of ≥21 inches diameter at breast height (dbh) will be maintained at 100% potential population levels of primary cavity excavators. On the ground monitoring will take place to ensure we are meeting snag requirements (EIS page II-34). The EIS does not state that the Forest Service will protect snags "except where they create a safety hazard." If this situation does occur it will be resolved on a tree-by-tree basis, and we will follow all Federal and Washington State safety laws.

Response to Comments 6 and 7 – The Peola Allotment is managed under a rest-rotation grazing system. Three Condition and Trend transects (benchmark measurements over a long-term change in plant composition cover and vigor) located in the Upper Charley analysis area indicate that soil stability ratings and vegetation ratings are in "good" condition (EIS page III-20). Since 1992 when the National Marine Fisheries Service listed Snake River spring/summer and fall Chinook as a threatened species, Term Grazing Permit holders have been required to implement "special terms and conditions" as a requirement of their permit. These special terms and conditions include: checking pastures twice weekly; removing cattle that trespass in riparian areas; adhering to specific range utilization standards in riparian areas as well as transitory upland areas; and maintaining all existing and future structural improvements to Forest Service standards. Monitoring and annual reports document the adherence to these special terms and conditions.

Range resources and logging have been considered in the analysis for the Upper Charley EIS. Timber harvesting and fuel load reductions have the ability to increase forage production in areas by creating openings and removing obstructions that have the potential to concentrate animal use. Monitoring has shown that with continued implementation of rest-rotation grazing, and continued implementation of the Special Terms and Conditions included in the Term Grazing Permits, all action alternatives would be within PACFISH Riparian Management Objectives (RMOs). Grazing will not degrade the rate of recovery for the vegetative resources in the analysis area. Condition and Trend transects will continue to be monitored (EIS page IV-20).

Response to Comment 8 – The Upper Charley Subwatershed Ecosystem Restoration Projects is an EIS. Charley Creek is not listed as a 403 Total Maximum Daily Load (TMDL) stream. Asotin Creek is a listed TMDL stream for fecal coliform bacteria at River Mile 4. This section is periodically sampled to test if bacteria are present. In the Upper Charley analysis area PACFISH standards prevent cows from grazing in riparian areas. Best Management Practices (EIS –Appendix B) will satisfy mitigation for stream temperature, nutrients, and sediment. These parameters are currently not a problem in the area, and implementation of the action alternatives would not cause Charley Creek to become a listed TMDL stream as displayed in Table III-2 on page III-7 of the EIS.

Response to Comment 9 – The Upper Charley EIS addresses cumulative effects to water quality (EIS pages IV-8 through IV-12). See our response to your Comments 6 & 7 regarding riparian management objectives. Monitoring of past management activities have indicated that PACFISH buffering is more than adequate to protect stream attributes. The cumulative effects of logging and grazing will not retard the attainment of Riparian Management Objectives.

Consultation with regard to on-going grazing activities in the Asotin Watershed has occured with National Marine Fisheries Service, and Washington Department of Fish and Wildlife. Both agencies have issued Biological Opinions on this activity.

Response to Comment 10 – Landscape prescribed fire treatments would generally occur in the fall of the year. In grass areas, burning may occur in late winter/early spring. Underburns would take place only during cool moist conditions, which can occur in spring as well as late fall (EIS page II-8). In all areas treated, fire prescriptions will be implemented to create a mosaic effect of burned and unburned sections. The effects of fuel treatments, by alternative, are addressed in the EIS pages IV-3 & 4.

Response to Comment 11 – The Forest's Soils Scientist performed pre-activity soil monitoring in the Upper Charley analysis area. His on-the-ground surveys, and use of his professional judgment provided a selection of harvest units that were representative of existing conditions found throughout the Upper Charley analysis area (EIS pages III-3 & 4). Existing soil impacts have been measured and effects are analyzed in the EIS. Soil monitoring to protect long-term site productivity and compliance with Forest Plan standards is done annually for timber sales and associated activities. Results of this monitoring are available in the Umatilla National Forest's Annual Monitoring Report.

Response to Comment 12 – Soil resource issues and environmental effects of proposed activities in the Upper Charley analysis area are addressed in the EIS on pages IV- 1 thru IV-5.

Response to Comments 13 and 14 – Please see Chapter IV-Environmental Effects of the Upper Charley Subwatershed Restoration Projects EIS for disclosure of cumulative effects, and information regarding the Endangered Species Act, Clean Water Act, National Forest Management Act, and Forest Plan Standards and Guidelines.

Response to Comment 15 – Biological Evaluations and Biological Assessments have been completed and are on file for all Threatened, Endangered, and Sensitive plant, aquatic and terrestrial species. Where appropriate**,** letters of concurrence from administrating agencies are also on file. Effects to Management Indicator Species, and aquatic, plant, and terrestrial threatened, endangered, and sensitive species can be found in Chapter IV of the EIS.

Response to Comment 16 – Current conditions in the Upper Charley analysis area are ripe for disturbance by fire. Three conditions of too many trees, too much fuel on the ground, and more continuous forest stands have made the Upper Charley landscape no longer crown-safe. There is simply too much biomass resulting in a high probability of initiating and sustaining crown fire activity. Because of conditions created by past fire suppression, it is likely any wildfire activity could occur without a higher intensity and across a larger area than would have usually occurred in the past (EIS page III-18).

If any action alternative (B-Modified, C, D, and E) is implemented, use of prescribed fire and mechanical fuel treatments on large portions of the analysis area would begin to lower ground fuel loadings and ladder fuels to conditions that would exist under a natural fire regime. Fire and fuel treatments would also reduce the density of fir understories. Areas which have understory trees mechanically removed prior to prescribed burning can reach desired stand structure and fuel profiles in fewer entries and in a shorter time period. Prescribed burning without prior mechanical entry would reduce stand density by inducing mortality in some understory trees. Standing dead trees would remain and create new down woody fuel loads in only a few years. Most of the areas treated only with prescribed fire would require additional stand conversion prescribed fire entries, beginning in as few as three years to continue reducing stand density and to remove the newly created ground fuels. Some of the areas would require yet another stand conversion prescribed fire entry in the following five to ten years before reaching the desired stand structure and fuel profile. Mechanically removing standing fuels prior to burning enhances our ability to

determine which trees, both understory and overstory, would be removed or remain in forest stands. Mechanical treatments would be used to protect large overstory trees and healthy young trees (EIS page IV-15).

Response to Comment 17 – Alternative D – Restoration without Commercial Timber Harvest, was designed to implement ecosystem based restoration projects excluding commercial timber harvest and using only mechanical fuel treatments and prescribed burning to reduce stocking densities and change stand compositions (EIS page II-20-24).

Response to Comment 18 – We will follow the Lynx Conservation Assessment and Strategy for implementing any activities in the Upper Charley analysis area. A discussion of direct/indirect and cumulative effects to lynx can be found in the EIS on pages IV-46-49.

During the analysis of the Upper Charley area the U.S. Fish and Wildlife Service (USF&WS) listed Canada lynx in the contiguous United States as threatened under the Endangered Species Act. The final rule was published in the Federal Register in March and became effective on April 24, 2000. The Forest Service has signed a Lynx Conservation Assessment Strategy with the USF&WS. In September of 2000 the Umatilla National Forest submitted to the USF&WS a programmatic Biological Assessment of Proposed Projects for the Umatilla National Forest On the Canada Lynx. The Upper Charley Subwatershed Ecosystem Restoration Projects were included in this programmatic Biological Assessment. On February 20, 2001 the USF&WS issued a Biological Opinion on the proposed projects. In the Upper Charley analysis area there are 22 units (approximately 464 acres) of harvest/prescribed fire units located in designated lynx habitat, which were given a "May Affect, Not Likely to Adversely Effect" determination. All units for the Upper Charley project identified in lynx habitat adhere to the Project Design Criteria established by the Umatilla National Forest, and submitted in the Biological Assessment. In order to be consistent with the programmatic Biological Assessment and eliminate the need for further consultation, a proposed project must meet two levels of project design criteria. Project Design Criteria (PDC) are divided into two types: Criteria I, designed to aid in the conservation and recovery of the listed species, and Criteria II which further reduces and/or negates the impact of a project that "May Affect: the listed species. Please see Appendix C of the Record of Decision for a complete listing of how proposed project activities in the Upper Charley project comply with project design Criteria I and Criteria II elements.

Response to Comment 19 – In Alternative B-Modified riprap replacement will be limited to approximately 30 feet in the area of Charley Creek immediately adjacent to Road 4206, where the stream is in danger of undercutting the road. Moving this section road is not feasible because of the steepness of surrounding terrain, and it would involve moving large amounts of dirt with a very good possibility of contributing significant amounts of sediment to the stream. The riprap will not change the course of the stream, but will allow the water to move along without cutting into the bank. Heavy equipment will remain on the road while placing riprap.

Alliance for the Wild Rockies

Response to Comment 1 – Proposed activities in the Upper Charley analysis area have a varying risk of introducing and spreading noxious weeds. Mitigation measures identified in Chapter II of the EIS page II-33 would limit the intensity and duration of the disturbance. Prevention measures would greatly reduce the transport and spread of noxious weeds. This risk would be managed by post-project surveys and employment of early treatment. Another positive factor would be the limited re-entry into the area. The projects are designed to not enter the Upper Charley area with ground disturbing activity for

approximately 20 years. This reduction in re-entry provides for long-term recovery of the area and confines any recurring effects. Limiting re-entry becomes a long-term prevention strategy that allows for maximum recovery of vegetation that would compete with introduced and present noxious weeds, as well as reduce the risk of spread by management activities upon completion of proposed projects (EIS page IV-32).

Response to Comment 2 – We are proposing to use ground based, skyline and helicopter logging in the Upper Charley analysis area, each of the logging methods selected was based on the least impacts to soil resources. Horse logging was not selected. The volume of wood products to be removed would not only take a very long time, it would also require repeated use of horse trails with the potential to cause soil compaction, disturbance and displacement and more potential for the spread of noxious weeds. Horse logging requires a path to every tree that is to be removed. Using the shelterwood group selection prescription would require repetitive trips to the same area to remove selected trees. The logging method of a ground based Forwarder uses trails covered with slash to reduce soil impacts. Horses cannot walk on trails covered with slash, and with repeated use there would be a potential to drag logs over exposed soil. Horse logging has been found to be effective in small areas, such as a campgrounds where only a limited number of single trees are removed, and there would be no recurring use of the horse trails.

Mitigation measures identified in the EIS pages II-33 lists the measures that will be taken to minimize the spread of noxious weeds. If horse logging were used the same measures would be used along with requiring weed-free feed for the animals. Monitoring and post-sale mitigation measures with horse logging would cover a larger area and require additional inspection because of the number of trails that would be needed, and the potential impacts it could have to soil.

Doug Burr

Response to Comment 1 – Thank you for your support of the preferred alternative.

Response to Comment 2 – The roads selected for obliteration are mainly non-system roads (22.04 miles) that are excess to current needs. These roads were originally constructed as temporary roads to access timber harvest units. Upon completion of the timber sale, these roads were blocked off to traffic, but they were never obliterated. Where it has been effective, we have gated roads in some areas on the District, but there are places where gates are not feasible as a means to restrict access.

Response to Comment 3 – We see prescribed fire as an important tool that will contribute to reestablishing fire as an ecological process across the landscape. Wherever possible, existing fuel breaks in conjunction with light-handed suppression methods will be used to contain the fire. Minimal hand fireline (1-2 foot mineral soil with a 12-15 foot brush out) will be constructed where needed (EIS page II-8).

United States Department of the Interior

Response to Comment 1 – Thank you for taking the time to review the Upper Charley EIS.

Al Johnson

Response to Comment 1 – Current conditions in the Upper Charley analysis area are ripe for fire disturbance. Past fire suppression has created conditions where a wildfire could occur with greater intensity than in the past and it could cover a larger area. Table III-11 in the EIS on page III-18 shows current fuel loading conditions in the Upper Charley area and what the desired fuel loadings are for the area.

Response to Comment 2 – Species composition within the Upper Charley analysis area consists of 57% grand fir, 33% Douglas fir, 9% sub-alpine fir, and a negligible amount 1.5% in ponderosa pine. Historically this area would have more ponderosa pine, but past fire exclusion and management practices have caused a shift toward Douglas fir and grand fir overstories and understories with a trend toward fire and insect susceptibility (EIS page III-22). This project is proposing to reduce tree-stocking densities and begin the reestablishment of vegetative composition to those more similar to their historic range in order to promote sustainability and vitality of current and future stands.

Response to Comment 3 – The implementation of Alternative A – "No Action" with current forest conditions outside of the historic range of variability, provides a greater risk of epidemic tree stand loss to disease and insects. There are only a certain amount of trees that can be supported per acre of land. The more individual trees on an acre the smaller allocation of water, soil nutrients, and necessary elements would be received per tree resulting in low vigor and growth. Insect infestations would increase with no management action (EIS IV-23).

Response to Comment 4 – Restoration (of ecosystems) as used in the Upper Charley EIS refers to *Actions taken to modify an ecosystem to achieve desired, healthy, and functioning conditions and processes. Generally refers to the process of enabling the system to resume its resiliency to disturbances* (Glossary page G-11).

Response to Comment 5 – The environmental analysis in this document is limited to the Upper Charley analysis area.

In the Upper Charley analysis area, most non-system roads would be obliterated by mechanical means. The method used would depend on the characteristic of the road. In most cut and fill situations, the fill material would be retrieved and the roadway would be recontoured to as close to its natural form as possible. On flat terrain, or where simple wheel tracks exist, road would be scarified and camouflaged with naturally occurring items, such as woody debris or rocks. As a minimum, all areas where soil is disturbed would be revegetatated with native grass seed. If native seed is not available, an alternative seed mixture may be used. (EIS page II-6).

Response to Comment 6 - Our goal for sustainability *is to meet the needs of the present without compromising the abilities of future generations to meet their needs; emphasizing and maintaining the underlying ecological processes that ensure long-term productivity of goods, services, and values without impairing productivity of the land* (Glossary page G-13).

Response to Comments 7, 8, 9, 10, 11, 12, and 13 –The answer to these comments is outside the scope of this analysis.

Response to Comment 14 - Effects on T&E species and MIS species have been addressed in the EIS pages IV-36 –38, and pages IV 45 – 49.

Response to Comment 15 - We will note your support for Alternative A.

Umatilla Forest Watch

Response to Comment 1 - We strive to provide in plain language a balance of information and detail so the decision maker and the public can readily understand the EIS. This is according to 40 CFR 1502.8. A Glossary was also provided in the EIS to define any words used in the analysis that would be unfamiliar to the reader.

Chapter I is designed to explain to the reader "who wants to do what, where, how, and why they want to do it." Chapter I follows the recommended format established in 40 CFR 1502.13. The Upper Charley EIS identified findings from the Asotin Watershed Assessment, and interdisciplinary team reviews indicated that past fire suppression, selective harvest, and recent drought conditions have contributed to the degradation of forest ecosystem sustainability in the watershed (EIS page I-3). Chapter I also indicates that these past practices and conditions have transformed stand structure, tree species composition, and tree stocking levels of forest stands in the watershed to non-historic levels and have contributed to increased fuel loading. Chapter I then proceeds to explain to the reader that as a result of these past practices there is a need to respond. We respond by listing the management actions we propose (our proposed action identified in our Notice of Intent) to bring the existing condition closer to the desired condition.

Response to Comment 2 – We have addressed the general actions listed in your comment in the following manner:

Prescribed fire suppression - Landscape prescribed fire treatments are incorporated in all of the action alternatives. It will take approximately 10-15 years to implement all of the fire prescriptions across the Upper Charley analysis area. Monitoring will enable us to evaluate additional long-term planning needed to reestablish fire as an ecological process in this area. Incorporating a long-term natural fire plan is outside the scope of this analysis. A planned natural fire program would need to be addressed in a future NEPA document.

Selective Harvest – Large healthy trees as well as culls and snags will remain in the Upper Charley analysis area. Basal area capabilities will determine the amount of trees that can remain on the site in a healthy and vigorous condition. Chapter II pages 8-9 discusses the silvicultural prescriptions to be used in Alternatives B, C, and E. The Thinning from Below prescription identifies "retaining healthy large individual trees, as well as groups of intermediate and large trees throughout each stand, and where possible, each acre would remain stocked with insect and disease resistant species." The Uneven-age Management prescription "would retain large healthy individual trees as well as groups of all sizes of the most pathogen resistant tree species throughout the stand." The Shelterwood Group Selection prescription also states "large healthy trees as well as groups of all sizes of trees resistant to pathogens will be retained throughout each treated stand." More detailed information can be found in the Silvicultural Prescriptions Report found in the analysis file. Nutrients will be cycled back into the soil from the remaining needles and branches of harvested trees. Leaving large diameter material on the site would not be good for soils, because when this material burns it often scorches the ground underneath it and burns through the duff layer (organic matter in various stages of decomposition on the floor of the forest). All action alternatives that include commercial timber harvest will be within Forest Plan standards, including Amendment 11 known as the "Screens" amendment. Only some (not all) trees 21 inches or greater in grand fir (moist biophysical group) and subalpine fir (cold biophysical group) located

in overstocked stands, or in areas identified where growth and vigor are lower would be designated for harvesting. This follows the "Screens" amendment since both biophysical groups are within their historical range of variability (HRV) in the Asotin Watershed (EIS pages II-10, 17, and 27).

Recent Drought Conditions – Weather conditions come in cycles and we are hopefully approaching the end of a 10-15 year drought cycle. Recent above average snow conditions have been followed by an earlier and warmer spring than we have usually experienced, so our snow levels have not remained as long as they usually do. Past drought conditions in conjunction with other factors mentioned have contributed to the degradation of the watershed. The purpose of the proposed activities in the Upper Charley EIS is to respond to the underlying need of restoring the watershed to a healthy condition, enabling it to withstand long-term disturbances, such as a drought.

Response to Comment 3 – Chapter I identifies the purpose and need for our actions as well as what activities we propose to implement to address those needs. Other alternatives analyzed in detail are presented in Chapter II. We are following the format established in 40 CFR 1502.13.

NEPA and implementing regulations, as well as case law, require a reasonable range of alternatives. The Upper Charley EIS has provided such a range based on identified key issues. Key issues are discussed in Chapter I pages 12, 13, 14, and 15. The Forest Service is mandated by Congress to manage National Forest Lands for multiple users. Under such management strategy, no single use can be maximized, and management requires balancing a variety of uses and interests.

An interdisciplinary process was used to design each of the action alternatives using various design elements. Each action alternative is designed to address the identified purpose and need, and respond to issues brought forth by the public. The Pomeroy Ranger District was responsive to the public's request to analyze in detail an alternative that incorporated restoration projects without commercial timber harvest. Alternative D was especially designed to respond to this request, and it was analyzed in detail.

In an effort to let the reader know ahead of time some of the factors we considered in developing the alternatives, we stated in Chapter II on page 1 "The alternatives are designed to stay within the framework of ecological stewardship and the Umatilla Forest Plan. With incorporating Forest Plan amendments, existing Federal and State laws, and Forest Service interim direction the range of options and/or differences between action alternatives is limited." I think that working within these parameters and the key issues, we presented an adequate range of alternatives for this analysis.

Response to Comment 4 – Nutrients from organic matter necessary for stand vigor will be cycled back into the soil from the needles and small branches left after commercial timber harvest. It is estimated that 90% of a trees nutrients are in the needles and small branches.

It is estimated that approximately 58% (4,015 acres) of the 6,922 forested acres within the Upper Charley analysis area are overstocked (EIS page III-23). This information is based on photo-interpreted data of canopy cover and plant associations in the analysis area. Full stocking occurs when a stand has developed dominant, co-dominant, and suppressed crown classes. Stands in the Upper Charley analysis area are experiencing mortality in the intermediate and suppressed classes due to competition for growing space, water, and nutrients. Mortality is occurring in the dominant class from insect and diseases, which attack larger trees in a stand when the competition for resources and growing space is significant. Approximately 20-35% of treated stands would retain undisturbed clusters of large trees (sound and cull) along with associated trees of all heights and diameters, snags, and down wood. Clusters will vary in size and shape from 0.1 to 3 acres in size. Individual trees and clusters will have more growing space, and will begin to grow faster with the potential to become larger than at present stocking levels. The

treatment will create a mosaic throughout the stand with a large amount of edge for animal species to forage while providing hiding cover and travelways (EIS page IV-28).

The detailed descriptions of Alternatives B, C, and E, state that "Some trees, 21 inches or greater dbh (diameter at breast height), in grand fir (moist biophysical group), and subalpine fir (cold biophysical group) located in overstocked forest stands, or in areas identified where growth and vigor are lower would be designated for harvesting. This follows guidelines in the "Screens" amendment because both biophysical groups are within their historical range of variability (HRV) in the Asotin Watershed (EIS pages II-10, 17, and 27). The low level amount of single story grand fir and subalpine fir is due to past fire suppression allowing stands to grow into multi-storied stands. Thinning from below and leaving single trees will contribute to increasing the level of single story stands in the Asotin Watershed.

Forest Plan Amendment #11 referred to as the "Screens Amendment" identified that an HRV analysis could be greatly influenced by scale, both spatially and temporally. It was recommended by our Forest specialists that an HRV analysis be conducted on land areas of 15,000 to 35,000 acres. Areas larger than 35,000 acres may also be appropriate and are acceptable; however, areas smaller than 15,000 acres should be avoided since vegetation patterns may be inconsistent with the prevailing disturbance regime for the area.

Response to Comment 5 – In the watershed it is possible to find fir sites that have 100 year-old firs. Historic fire was more frequent and patchy, often burning grasses and small trees. Moist micro sites often times would not be affected by this random fire pattern, and firs on these sites would often survive the fire.

Prescribed burning that is proposed for the Upper Charley analysis area will take place over a 10-15 year period. This will begin the process of establishing fire as an ecological process. Monitoring will take place during and after prescribed burning. Any long-term plan for natural fire in the area is outside the scope of this analysis, and would be analyzed under a separate NEPA document.

Response to Comment 6 - Over the short-term, road reconstruction, and obliteration activities would increase overland sediment movement. However, these effects would be partially offset by immediate improvements in drainage and infiltration (drainage on reconstructed roads and infiltration on obliterated roads) that would lead, in the long-term, to reduced erosion and sedimentation impacts to stream channels. Over the long-term, stream channel and riparian conditions would improve because of reduced erosion and sedimentation from poorly located and maintained roads…(EIS page IV-8). Road projects would be implemented using Best Management Practices for Water Quality (EIS - Appendix B).

In Alternative B-Modified, riprap replacement will be limited to approximately 30 feet in the area of Charley Creek immediately adjacent to Road 4206, where the stream is in danger of undercutting the road. Moving this section road is not feasible because of the steepness of surrounding terrain, and it would involve moving large amounts of dirt with a very good possibility of contributing significant amounts of sediment to the stream. The riprap will not change the course of the stream, but will allow the water to move along without cutting into the bank. Heavy equipment will remain on the road while placing riprap.

Response to Comment 7 – Alternative B has the second highest short-term effect on stream channel, water quality, and aquatic habitat. Over the long-term there would be localized beneficial effects as a result of road treatments, in-channel habitat enhancements, and a more extensive reduced risk of wildfire (EIS page IV-8). Placement of all in-channel structures will take place with a District hydrologist present

at the site during implementation to approve the location and placement of all in-channel structures. The hydrology report on file also states that the activity of placing in-channel structures is temporary and the recovery is rapid and immeasurable downstream.

Although Washington Department of Fish and Wildlife (WDF&W) survey numbers are not evident in the EIS, references to the presence of Snake River Steelhead is made (EIS pages III-32 & 33). The Biological Assessment, which is part of the analysis file, contains a table that displays the results of September spawning ground surveys for steelhead by the WDF&W within the Asotin Creek watershed since 1986 (Schuck, Viola and Keller 1997). This table displays the total redds/mile surveyed in the North Fork Asotin Creek, South Fork Asotin Creek, and Charley Creek. The surveys are from 1986 to 1997. Although the habitat may be suitable it is not likely being used. Recent Forest Service stream surveys, conducted from the mouth to the headwaters of Asotin Creek, show habitat changes and physical barriers (i.e. beaver dams) probably restrict steelhead access to the lower portion of Forest Service lands. Conversations with Glen Mendel, WDF&W District Fish Management Biologist, and District Fish Biologist Del Groat, have verified this probability. Although the habitat may be suitable it is not likely being used.

In the Biological Evaluation for the Upper Charley analysis area the determination of effect for Snake River Steelhead for all action alternatives was given a "May Effect Not Likely to Adversely Affect." National Marine Fisheries Service has reviewed the Biological Evaluation as well as the Biological Assessment, and a letter of concurrence is on file.

The intent for all boulders used to create pocket pools is to have the resulting area look natural in appearance and not look like "garden pools."

All of the action alternatives reduce the existing open road density. Alternatives B-Modified, D, and E reduce it from 2.17 mi./sq. mi. to 2.12 mi./sq. mi., and Alternative C reduces it to 1.57 mi./sq. mi. Implementation of any of the action alternatives would be moving in the direction of attaining the Forest Plan desired condition of approximately 2.0 miles per square mile of open road density (FP 4-11). On the ground, the 0.12 mi./sq. mi. over the Forest Plan desired condition equates to only 0.63 miles of road.

I reviewed the comments received after the Draft EIS was published regarding the level of Satisfactory Cover remaining in the area after project implementation. Incorporating recommendations from the Zone Wildlife Biologist, I have decided to defer approximately 385 acres (19 units) of Satisfactory Cover from harvest and prescribed burning in this decision. I have modified Alternative B to reflect this change. Appendix B of the Record of Decision lists the specific units that will not be included in the Record of Decision. With this change, the level of Satisfactory Cover remaining in the Upper Charley analysis area is above the Forest Plan standard of 10%.

The effects to lynx habitat were discussed in the EIS in Chapter IV pages 46, 47, 48 and 49. Please see our Response to Comment 18 under the heading ONRC.

Response to Comment 8 – The Forest Plan states the economic well-being and lifestyles of people in the 10 county area of the Umatilla National Forest are affected by products and services from the Forest. The Forest Service administers one-fifth of the land in Garfield County. The availability of wood fiber, livestock forage, quality of water, and recreation opportunities provided by the Forest affects economic activity in communities locally and regionally. Use of forest resources assists in creating jobs and income, which in turn influences social stability and other aspects of social well-being (Chapter I-7). Timber is not the only resource that affects the economic well-being of the local area. Receipts from timber sales, grazing permits, as well as business from hunters, and recreationists, are important to small communities and contribute to the local economy in several different ways (gas stations, eating

establishments, coffee shops, motels, etc…). Since 1987, approximately 82% of timber sales have been awarded to local bidders, and the timber processed at local mills.

New legislation entitled "Secure Rural Schools and Community Self-Determination Act of 2000" will stabilize annual payments to states and counties for schools and roads.

Response to Comment 9 - We will make note of your recommendation to implement Alternative D.

Errata Sheet

The following are errors that were discovered after copies of the Draft EIS were printed. **Bold print** indicates specific correction in text or data. The deciding official, prior to signing the Record of Decision, reviewed the corrections listed below. The changes in data were determined to not affect the conclusions presented in the Draft EIS. Most of the text corrections are editorial in content and are provided to clarify the document.

Chapter - Page	**Description of the Correction**
I-10	Third bullet item should read: The Biological Opinion for the effects to Bull Trout from Continued Implementation of Land and Resource Management Plans and Resource Management Plans s Amended by the Interim Strategy for Managing Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, Western Montana, and Portions of Nevada (INFISH), and the Interim Strategy for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PACFISH) from **U.S. Fish and Wildlife Service (Regions 1 and 6)** dated August 14, 1998.
II-7	Last bullet item on the page -description of fire prescription LTRXF should read. (This treatment would be **used in higher elevation units that are jackpot burned**. The residual overstory…).
II-9	Under the heading Acres proposed for treatment in Alternative B are summarized below: Thinning from below **(HITH) –** 753 acres
II-16	Fourth bullet item on the page - description of fire prescription LTRXF should read. (This treatment would be **used in higher elevation units that are jackpot burned**. The residual overstory…).
II-17	Alternative C – Summary of Specific Features under the heading Fuel Treatments (outside harvest units) need to add Fire Prescription THJP – acres – 57.
II-32	Under the third objective listed – Protect fisheries the task should read: In-channel restoration projects would be implemented only during the months of July 15th through August 15th. **The District Hydrologist will give location approval for placement of all in-channel**

	structures. Under responsibility it should read FB and **Hydro.**
III-34	Table III-19 Under the column heading "Species" North American lynx should now be listed as **Threatened.**
IV-5	Table IV-1 under the column heading "Alternative D Acres by system, and % of areas treated with mechanical fuels yarded" should read as follows by yarding system: Helicopter 0 Skyline 903 acres **36%** Tractor/skidder 1548 acres **64%**
IV-18	The last paragraph on this page should read: Mechanically removing standing fuels from a site prior to prescribed fire treatment reduces the amount of particulate produced from burning. An analysis was performed of PM10 particulate produced by different treatment methods including: (1) wildfire, (2) dry condition prescribed fire with no pretreatment, (3) jackpot or cool, moist burning conditions after mechanical tree removal, **(4) dry condition prescribed fire following mechanical treatment, and cool moist burning conditions in major forest fuel types in the Upper Charley analysis area.** In nearly every fuel type…
IV-28	First full paragraph on this page – Individual trees and clusters will have more growing space, will "release" begin to grow faster with the potential to become **larger** than at present stocking levels.
IV-49	Table IV-16 under the column heading "Species" it should now read: North American lynx (**Threatened).**
IV-64	Forest Service Road Management interim direction dated February 12, 1999 has been replaced by interim directive 7710-2001-3 dated December 14, 2001.