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Forest
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Decision Notice And Finding of No Significant Impact

Vulcan Vegetation Management Project

**Republic Ranger District, Colville National Forest
Ferry County, Washington**

T40N, R32E Sections 13; 24-25
T40N, R33E Sections 3-10; 14-23; 26-33
T39N, R33E Sections 4-6

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Decision Notice And Finding of No Significant Impact Vulcan Vegetation Management Project

USDA FOREST SERVICE
COLVILLE NATIONAL FOREST
REPUBLIC RANGER DISTRICT
FERRY COUNTY, WASHINGTON

This Decision Notice documents my decision regarding actions proposed in the *Vulcan Vegetation Management Project* Environmental Assessment, January 24, 2007. The Vulcan EA (Environmental Assessment) is available on request from the Three Rivers Ranger District, 255 W 11th Avenue, Kettle Falls, Washington, 99141 or the Republic Ranger District, 650 East Delaware, Republic, Washington, 99166. The EA documents the site-specific analysis conducted by an interdisciplinary team to determine the potential environmental effects connected to the action alternatives.

Project Location

The project area is located approximately two miles northwest of Curlew, Washington, and is within the Republic Ranger District, Colville National Forest, Ferry County, Washington. The legal description is: Township 40 North, Range 32 East, Sections 13, 24-25; Township 40 North, Range 33 East Sections 3-10, 14-23, 26-33; Township 39 North, Range 33 East, Sections 4-6.

The Vulcan Project area includes 17,277 acres of National Forest System Lands and 32 acres of Bureau of Land Management lands. This decision notice approves only actions proposed on National Forest System lands. See Project Location map in the EA page 2.

Corrections to the Environmental Assessment

See Appendix A and Selected Alternative below.

The Decision and Rationale for the Decision

Selected Alternative

The selected alternative is “Modified Alternative C.”

This alternative would implement all aspects of Alternative C as described in the January 24, 2007 Environmental Assessment Vulcan Vegetation Management Project (EA), except as modified in the following eight paragraphs. Descriptions of Alternative C can be found in Chapter 2, pages 23-27. A

map is located on page 25. Design elements (mitigation measures) described on pages 28-38, monitoring procedures described on pages 38-39, and Best Management Practices described in Appendix A are included in this decision. Alternative C is modified by this decision as follows:

A design element to prevent spread of noxious weeds between vegetation treatment units is added. This design element requires the Forest to survey for invasive species (noxious weeds) in units of the project not previously surveyed. The Forest Service Noxious Weed Coordinator would identify populations of noxious weeds located where they could be moved during project implementation into a unit free of that species. These populations of concern would be included on sale area maps. Timber sale contract provision entitled “Equipment Cleaning” would be included in timber sale contracts for this project. The Equipment Cleaning provision states (a) Areas, known by Forest Service prior to timber sale advertisement, that are infested with invasive species of concern are shown on Sale Area Map, and (b) “...In addition, prior to moving Off-Road Equipment from a cutting unit on this timber sale that is shown on Sale Area Map to be infested with invasive species of concern to any other unit that is indicated on Sale Area Map as being free of invasive species of concern, Purchaser shall again take reasonable measures to make each such piece of equipment free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds.” Information would be communicated to presale via the project implementation plan (Colville National Forest Environmental Management System, 4.4.6).

A design element to reduce impact to big game in winter range (MA6 and MA8) is added. Units 21, 28, 31, 33, 35 and 71 would be harvested during winter. All lie in big game winter range. To allow big game to habituate to harvest activities and to minimize disturbance to big game, harvest will start and cease at about the same time each day, and at the end of each day’s activities, roads that access units would be blocked to prevent those not involved with harvesting timber from accessing the areas. The most effective barrier to prevent traffic will be decided by the sale administrator. At the end of harvest activities, if sufficient snow is available, a berm would be created on the road to prevent further vehicle traffic.

The description of Associated Roadwork in Alternative B (EA page 21) that also applies to Alternative C is clarified. The sentence: “The unauthorized road that will be constructed will also be closed.” should read “The unauthorized road that will be *reconstructed* will also be closed.”

The description of Mechanical Pile under the Proposed Fuel Treatments for Alternative B (EA page 23) that also applies to Alternative C is changed. The change is from “**Mechanical pile** means that logging equipment would drop limbs and tops into small piles along the skid trail as it tops, limbs, and bucks logs” to “***Mechanical pile*** means that logging equipment would drop limbs and tops into small piles along skid trails.”

The design element Noxious Weeds Management number 3 (EA page 31) is changed from: “Contact provisions will provide for cleaning of equipment prior to move-in and use off of landings” to “*Contract provisions will provide for cleaning of off-road equipment prior to move in.*”

The design element Wildlife number 8 (EA page 35) to protect goshawk nests is replaced in whole with the following language.

Continue to monitor the historic goshawk nest site through summer of 2008. This nest has been active in the past but was not used in 2006. If it becomes active, or if other raptor nests are found within or adjacent to commercial harvest units, the following mitigations will be implemented:

- If a nest is found, the Forest Service will buffer the nest area, outline a post-fledging area, and restrict timing of harvest-related activities.
- The size of the buffer will consist of 40 acres around a nest site to prevent direct negative impact to goshawks and the nest site.
- Delineate the post-harvest fledging area around the nest site.
- Restrict all harvest-related and post-harvest-related activities that could disturb goshawks from March 1 through September 30 of each year. These activities may include, but are not limited to timber harvest, road location and building, road use, underburning, and other disturbing activities (unit layout and marking, monitoring, planting and others). Exceptions may be made on a case-by-case basis as approved by District Wildlife Biologist for specific activities that may be permitted during this period.

The legend on page 195 of Appendix B is corrected. The denotation “H” means “*Hand thinning*” not helicopter logging.

In addition, the following units would be added, dropped or expanded:

Timber Harvest Unit Number	Modifications
27, 29	Add entire units. No additional road construction or reconstruction would be necessary. These units were already present in Alternative B.
30, 35, 53	Expand units. These units were already present in Alternative B with their expanded boundaries.
54	Add part of unit 54, outside the portion with late structure (approximately 5 acres). This unit will require a minor amount of light road reconstruction (0.2 miles) and was already present in Alternative B.
26	Drop this unit.

In summary, Modified Alternative C would differ from the original Alternative C as follows:

- Three timber management units would be added, one timber management unit would be dropped, and three timber management units would be expanded in size.
- Timber management acres treated would change from approximately 7399 to 7426 acres (0.4% increase).
- Light road reconstruction would increase by approximately 0.2 miles (0.7% increase in total road reconstruction).
- Estimated timber volume may increase slightly but would be more likely to remain at approximately 9 million board feet (17,317 hundred cubic feet)¹.
- Design elements and language are added or modified to (1) reduce the predicted spread of noxious weeds within the project area, (2) reduce impacts to big game during winter logging activities, (3) protect goshawk nests, (4) facilitate operations, and (5) fix editorial mistakes.

¹ Based on a gross estimate of approximately 8 thousand board feet per acre

A map of Modified Alternative C showing individual unit labels is included at the end of this Decision Notice in Appendix B. A map of road construction and reconstruction included in this decision is in Appendix C.

Rationale for the Decision

I have selected the alternative that best meets the purpose and need while addressing concerns about environmental impacts expressed by the public. The No Action Alternative (Alternative A) was not selected because it does not meet the purpose and need of the project (the risk of stand-replacing wildfires would not be reduced, forest health would not be improved, and wood products would not be provided to help local sawmills and communities). Action Alternative B meets the purpose and need very well, but did not resolve some of the environmental issues to the satisfaction of some members of the public. Alternative C, while it addressed the environmental concerns that some members of the public had with the Proposed Action, did not go far enough to reduce tree stocking to adequately address the need for improved forest health.

Changes to Alternative C that result in the selected alternative, Modified Alternative C, were made for the following reasons.

A design element to prevent spread of noxious weeds between units was added. This element is included in response to public comments and as provided for in Pacific Northwest Regional direction (*Preventing and Managing Invasive Plants Final Environmental Impact Statement and Record of Decision*, USDA Forest Service, 2005).

A design element to reduce impact to big game in winter range (MA6 and MA8) is added. This element was inadvertently omitted from the Vulcan Vegetation Management Project Environmental Analysis document.

The description of Associated Roadwork in Alternative B (EA page 21) also applying to Alternative C is clarified. This clarifies a misstatement.

The description of Mechanical Pile under the Proposed Fuel Treatments for Alternative B (EA page 23) also applying to Alternative C is changed. This change was made to facilitate operations for accomplishing mechanical treatment fuel disposal goals.

The design element Noxious Weeds Management number 3 (EA page 31) is changed. This change increases the effectiveness of equipment washing standards because it includes washing of equipment that stay on landings prior to entry.

A design element Wildlife number 8 (EA page 35) is replaced in whole. This element is replaced to clarify the existing design element language.

The legend on page 195 of Appendix B is corrected. The denotation “H” means “*Hand thinning*” not helicopter logging.

Units 27, 29 and 54 were added and Units 30, 35, and 53 were expanded for the purpose of thinning dense stands to reduce inter-tree competition and tree susceptibility to insects and diseases. By

decreasing stand density, removing diseased trees, and modifying tree species composition, forest health would be improved and more structurally diverse stands would eventually develop. Most of these units can be accessed from existing roads. The exception to this is Unit 54 for which 0.2 miles of light road reconstruction would be necessary. Thinning these stands is consistent with the purpose and need for forest health.

Unit 26 was dropped in response to strong public sentiment regarding treatment in stands considered “old growth.”

The selected alternative meets the purpose and need of the project as follows:

1. *Reduce the risk of wildfire within the wildland-urban interface (WUI) by reducing hazardous fuels.* Modified Alternative C would reduce hazardous fuels by treating approximately 6558 acres through underburning, jackpot burning, whipfalling, and mechanical piling in addition to commercial, precommercial and small pole thinning on 1792 acres.
2. *Improve forest health by reducing stand density and removing diseased trees.* Modified Alternative C would improve forest health by treating approximately 1792 acres through commercial, precommercial, and small pole thinning.
3. *Help sustain local sawmills and communities.* Modified Alternative C would harvest approximately 9 million board feet (approximately 17,317 hundred cubic feet).

Management Direction

Forest Plan

The *Forest Plan* is the guiding management direction for the Vulcan Project area. The Vulcan Environmental Assessment incorporates the *Forest Plan* by reference, and is tiered to the *Forest Plan*'s FEIS (Final Environmental Impact Statement, USDA Forest Service, 1988). The *Forest Plan* contains Standards and Guidelines and Management Area designations and prescriptions that apply to the entire Colville National Forest, including the Vulcan Project area. Impacts of programmatic decisions contained in the *Forest Plan* are disclosed in the *Forest Plan FEIS*.

The *Forest Plan* includes amendments that are also management direction for this project. They are:

Regional Forester's Forest Plan Amendment #2 entitled *Revised Continuation of Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales*. This direction was implemented to preserve future planning options concerning wildlife habitat associated with Late and Old structural stages, fish habitat, and old forest abundance until the *Forest Plan* is updated. In this interim direction, the Regional Forester directed the National Forests in eastern Oregon and eastern Washington to maintain and/or enhance Late and Old Structural Stages in stands subject to timber harvest.

Inland Native Fish Strategy. This amendment replaced the interim riparian standard from Regional Forester's Forest Plans Amendment #1. The Inland Native Fish Strategy is hereafter referred to as "INFISH Direction."

Regional Forester's Forest Plans Amendment #2 and the INFISH Direction are collectively referred to as "Screening Direction" in the Environmental Assessment.

Regional Forester's October 11, 2005 amendment to forest plans in Region 6, *Preventing and Managing Invasive Plants*, (Preventing and Managing Invasive Plants Record of Decision, Appendix 1-1). This management direction includes invasive plant prevention and treatment/restoration standards intended to help achieve stated desired future conditions, goals and objectives.

Public Involvement

Project Development and Scoping

The proposal was listed in the Colville National Forest Schedule of Proposed Actions² beginning with the Fall Fiscal Year 2005 issue.

On January 11, 2006 the Forest Service met with Ferry County Commissioner Brad Miller, and Lloyd McGee and David Heflick of the NEWF Coalition (Northeast Washington Forestry Coalition) to discuss the proposed action and the purpose and need.

The initial proposal was developed by the Forest Service and was provided to the public and other agencies for comment during a scoping period that began on January 24, 2006 and ended March 1, 2006. A scoping letter dated January 24, 2006 was sent to 124 people, businesses, and organizations including the Colville Confederated Tribes, those on the Colville National Forest general mailing list, those identified through the Ferry County Assessor's database as living adjacent to the project area, and those that expressed interest in the project. This letter explained the purpose and need for the project, described the proposed action, and included a comment form for the recipients to use. Nine letters, comment forms or inquiries were received following the mailing, and one prior to. Issues identified in the comments are summarized in the EA pages 13-16.

February 28, 2006, and March 20, 2006, meetings with the Ferry County Commissioner Brad Miller, and Lloyd McGee and David Heflick of the Northeast Washington Forestry Coalition (NEWF Coalition) took place that focused on the proposed alternatives and provided a narrower interpretation of the purpose and need in regards to WUI needs.

A field trip with Brad Miller, Lloyd McGee, David Heflick, Dan Richhart, Ron Gray, Josh Henderson, and Eric Zamora took place on June 7, 2006 to discuss silviculture and fire prescriptions. Viewing units including unit 26 on-the-ground helped explain reasons for particular prescriptions and shed light on potential problems that could arise.

² The **Schedule of Proposed Actions** is a quarterly publication that provides notice of upcoming proposals that may undergo environmental analysis and documentation.

EA Comment Period

Two action alternatives (B and C) were presented to the public during the formal 30-day comment period required under regulations found in 36 CFR 215, beginning on January 24, 2007. An “Opportunity to Comment” legal notice was published in the *Colville Statesman-Examiner* (the newspaper of record for projects where the Colville National Forest Supervisor is the Responsible Official) on January 24, 2007, and in the *Republic News-Miner* on February 1, 2007; Environmental Assessments were mailed to 14 interested agencies, organizations, and individuals. The 30-day comment period ended on February 23, 2007. Four comment letters were received and are summarized as follows:

Comment Statement	Discussion
Jim Olson – Supports project, concerned with cattle movement in response to project. Requests notification of burn dates for prescribed burn treatments.	Republic RD Fire Management will notify Mr. Olson as required by design element Number 4 in Fuel Treatments and Air Quality in EA (page 32).
Thad Carson – Supports project, concerned with movement of noxious weeds, particularly houndstongue, from infested units to un-infested units within the project area.	This concern is typically addressed by inclusion of contract provision titled Equipment Cleaning stating: (a) Areas, know by Forest Service prior to timber sale advertisement, that are infested with invasive species of concern are shown on Sale Area Map. Then under (b)..... "In addition, prior to moving Off-Road Equipment from a cutting unit on this timber sale that is shown on Sale Area Map to be infested with invasive species of concern to any other unit that is indicated on Sale Area Map as being free of invasive species of concern, Purchaser shall again take reasonable measures to make each such piece of equipment free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds." Currently there are maps showing infested areas along roads, additional survey notes have been taken during fuels inventories. Where needed, additional surveys are scheduled in FY 07 to identify infestations of invasive species of concern in treatment units. This information will be included on sale area maps.
Michael Brewer - Supports project, but has questions regarding economic gain.	Economic analysis shows that the proposed action generates funds in excess of costs. Please refer to EA pages 158 and 159, Economics.
Northeast Washington Forestry Coalition – Concern over treatment in Unit 26, a stage 6 HRV stand referred to as “old growth” in the EA.	While it is not in conflict with the Forest Plan, we will drop Unit 26 in response to strong public sentiment regarding mechanical treatment in “old growth.” The 1995 amendment to the Forest Plan also know as Eastside Screens, states that we will move stands to be within the historic range of variability (HRV). Unit 26 is in structural stage 6, multistoried, late structure, a condition in Douglas-fir type that is over the minimum threshold for percent acres in HRV. The proposed action was to move it to structural stage 7, also a late structure, but single storied. Structural stage 7 is more fire resistant and one that is below the minimum threshold for

	<p>percent acres in HRV. This treatment would be consistent with the Forest Plan.</p>
<p>Northeast Washington Forestry Coalition – No discussion of unit 26 specifically in the EA.</p>	<p>Although unit 26 is not specifically discussed by unit number in the EA, an educational field trip was conducted to this unit with the NEWF Coalition and other publics. Rational for treating this unit was included in the EA in several sections: HRV is explained in the EA under Existing Conditions, current structural patterns (EA pages 50-53), under Descriptions of Alternatives B and C there is a discussion of timber harvest and moving stands toward late and old structure and HRV (page 57); discussion of moving stands to single story late structure is on page 60.</p>
<p>Northeast Washington Forestry Coalition – Wording and intent of the purpose and need statement was not satisfactory, specifically the inclusion of generating commercial products in the purpose and need as an objective, rather than as a by-product of other treatments.</p>	<p>With regards to Purpose and Need statements a) <i>Reduce the risk of wildfires within the WUI</i>, and b) <i>Improve forest health</i>, it is true that wording agreed to by District Ranger Joe Alexander was modified in the Environmental Assessment. However, Ranger Alexander left the Republic District, subsequent Rangers, not fully understanding that a firm commitment had been made, modified the wording slightly. In reviewing the EA and the agreed-upon wording, I feel the spirit of these purpose and need statements are present; therefore no further changes are warranted.</p> <p>With regards to Purpose and Need c) <i>Help sustain local sawmills and communities</i>, the Forest Service was not aware of the agreement between the NEWF Coalition and Ferry County Commissioner Miller, and there is no indication that the Forest Service agreed to adopt wording as stated in the NEWF Coalition’s February 23, 2007 comment letter. However, it is apparent that the NEWF Coalition, the County Commissioners, and the Forest Service agree that providing wood products is a desirable project outcome. Because changes in the purpose and need at this point would not change the project’s decision, modifying the language at this stage of the environmental analysis process is not warranted.</p>
<p>Northeast Washington Forestry Coalition – Why did we drop units 27, 29, 54 and reduced the size of units 30, 35 and 53 if we believe they fit the purpose and need for forest health? Also, they couldn’t find an analysis of effects for including or dropping these units.</p>	<p>There was an initial concern from the public for treating units outside the identified WUI for this project because they felt it did not meet the purpose and need to reduce fuels in the WUI. The CNF responded by developing Alternative C. Through continuing communication with this party during and after the analysis, that concern no longer exists. Treatment of these units meet the purpose and need to improve forest health and these units are added back in Modified Alternative C.</p>

Issues

Issues raised by the public and other agencies are listed on pages 13-16 in the EA. Of these, concern for economics, new road construction, soil productivity, erosion, wildlife and noxious weeds were identified as being issues within the scope of the project. The modifications to Alternative C do not change the level of new specified road construction. Impacts to soil productivity and erosion may slightly increase due to the additional 27 treated acres, though effects are within the bounds of the detailed analysis of the alternatives. No new timber management or fuel reduction units were created in this decision notice. Modified Alternative C includes a noxious weed design elements that would likely reduce the spread of noxious weeds predicted in Alternative C. Impacts to wildlife would be slightly less due to the reduced spread of noxious weeds and the addition, or modification of design elements to clarify goshawk nest and winter deer range management. The project would remain economically viable.

Alternatives Considered

No Action (Alternative A)

The No Action alternative is described as not implementing actions proposed under this environmental analysis. Actions to reduce hazard fuels and manage timber would not be implemented at this time.

Alternative B

Alternative B is the proposed action developed by the Forest Service to address the purpose and need within the constraints of the Forest Plan. This Alternative would utilize controlled burning and thinning as the primary activities. Details of Alternative B are found on pages 16-23 of the EA.

Alternative C

Alternative C was an alternative collaboratively developed by the Forest Service, Ferry County Commissioners, and NEWF Coalition to address the issues that emerged in response to the proposed action. Some members of the NEWF Coalition felt that commercial thinning on moist sites (Fire Regime 3) that are not within the identified wildland-urban interface (WUI) would not contribute to the purpose and need to reduce the risk of wildfires within the WUI. This concern precipitated the creation of Alternative C.

Under Alternative C, controlled burning and thinning would be the primary activities. Compared to Alternative B, Alternative C places slightly more emphasis on the need to reduce risk of wildfires within the wildland-urban interface (WUI), and slightly less emphasis on the need to improve forest health and provide wood products. It did so by adding one unit (Unit 1) on a dry site (Fire Regime 1), and dropping or reducing the size of several units on moist sites (Fire Regime 3) that are located away from WUI structures (dropped Units 27, 29, 54; reduced the size of Units 30, 35, and 53). Alternative C also dropped Units 18 and 19 because costs and adverse effects associated with new road construction were felt to be greater than the economic and ecological value gained by treating the units.

A description of Alternative C can be found in Chapter 2, pages 23-27. A map is located on page 25. Design elements (mitigation measures) are described on pages 28-38, monitoring procedures are described on pages 38-39, and Best Management Practices described in Appendix A of the EA.

Alternative Not Considered In Detail

An alternative that eliminated or significantly reduced landscape-scale prescribed burning (underburns and jackpot burns) was considered early in the planning process in response to a public comment that burning:

- Adversely affects soil by changing physical properties, exposing soil to erosion, increasing sediment production, and reducing nutrient availability;
- Adversely affects wildlife by destroying nests, eggs, and young;
- Increases the extent of noxious weeds.

Under this alternative, hazard fuels would either not be treated, or would be treated using mechanical methods only.

This alternative was eliminated without detailed analysis because it would fail to meet the purpose and need to reduce hazardous fuels. Treating the area without underburning or jackpot burning would entail cutting, piling, and burning piles; or cutting, transporting fuels to roads, and transporting material to an off-site processing facility. Treating an area comparable to that included in the proposed action using only mechanical methods would be impractical due to prohibitively high cost, terrain that is inaccessible to skidding or yarding machinery, and lack of roaded access to many areas.

Consistency with the Forest Plan, Laws, Regulations, and Policies

The selected actions described above comply with the Colville *National Forest Land and Resource Management Plan (Forest Plan)*, including amendments.

- The selected actions meet all standards and guidelines prescribed in Chapter 4 of the *Forest Plan* for the following Management Areas:

Management Area 1, Old Growth Dependent Species Habitat (*Forest Plan* pages 4-69 to 4-72)

Management Area 5, Scenic/Timber (*Forest Plan* pages 4-93 to 4-96)

Management Area 6, Scenic/Winter Range (*Forest Plan* pages 4-97 to 4-100)

Management Area 7, Wood/Forage (*Forest Plan* pages 4-101 to 4-104)

Management Area 8, Winter Range (*Forest Plan* pages 4-105 to 4-108)

- The actions are consistent with Forest-wide Standards and Guidelines found on *Forest Plan* pages 4-35 through 4-60.
- The actions are consistent with direction contained in Regional Forester's Forest Plan Amendment #2 and with INFISH Direction (EA page 12).

- The actions are consistent with the *Forest Plan* because Design Elements (EA pages 28-38), and Best Management Practices (EA Appendix A), have been fully applied in the selected actions. The project is feasible and reasonable, and it results in applying management practices that meet the *Forest Plan* overall direction of protecting the environment while producing goods and services.

National Forest Management Act

The selected actions which alter vegetation meet the minimum specific requirements of the National Forest Management Act (see Forest Service Manual 1921.12). Rationale is as follows:

1. Soil productivity will be irreversibly damaged in the construction of new roads, landings, and rock pits. However, these effects are within *Forest Plan* guidelines. See EA page 126 and the Soils Report in the project file.
2. There is assurance that the lands can be adequately restocked within five years after final regeneration harvest (FSM 1921.12g): See the *Vulcan Management Project* Silviculture Report.
3. Streams, streambanks, shorelines, lakes, wetlands, and other bodies of water are protected from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment where harvests are likely to seriously and adversely affect water conditions or fish habitat: See EA page 77 and the *Hydrology Report for the Vulcan Management Project*.
4. The harvesting systems to be used are not selected primarily because they will give the greatest dollar return or the greatest unit output of timber.
5. The interdisciplinary review has been completed and the potential environmental, biological, aesthetic, engineering, and economic impacts have been assessed on each advertised sale area and the cutting methods are consistent with the multiple use of the general area.
6. Timber harvest is carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, esthetic resources, cultural and historic resources, and the regeneration of timber resources. See discussion on EA pages 47-159 and Soils, Hydrology, Fisheries, Wildlife, Recreation, Visual Quality, and Silviculture Reports in the project file.

Other Laws, Regulations, and Policies

This project is consistent with all laws, regulations, and policies listed below.

Federal Water Pollution Control Act and Amendments of 1972 (the Clean Water Act), and Executive Order 11990 Protection of Wetlands: The project is in compliance with the Clean Water Act and EO 11990 because it has no significant adverse impacts on water quality or wetlands. See EA pages 77-89 and 162, Appendix A Best Management Practices, and Hydrology Report in the project file.

36 CFR 296 Protection of Archaeological Resources, and 36 CFR 800 protection of Historic Properties: The project is in compliance with regulations that protect archaeological and historic properties. See EA pages 147-150, and Heritage Resource report and Colville National Forest Section 106 Compliance form in the project file.

National Environmental Policy Act of January 1, 1970, and Forest Service Manual 1950: This project is consistent with the National Environmental Policy Act and Forest Service Manual 1950. Project planning and the environmental analysis (a) used a systematic interdisciplinary approach in planning and decision making, (b) considered the environmental impact of proposed actions, (c) identified adverse effects which could not be avoided should the project be implemented (see EA pages 47-163), (d) considered alternatives to the proposed actions (see EA pages 17-42), (e) considered the relationship between local short-term uses of the human environment and the maintenance and enhancement of long-term productivity, and (f) identified any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented (see EA pages 57, 69, 72, 130, and 133).

The environmental analysis followed regulations at 40 CFR 1500-1508, which establish procedures and rules governing environmental analysis and documentation; ensure that environmental information is available to public officials and the public (see EA pages 164-165), including identification issues (see EA pages 13-16); and provide direction to assist public officials in making decisions based on an understanding of environmental consequences.

The environmental analysis also followed Forest Service implementing procedures in Forest Service Handbook 1909.15, chapters Zero, 10, and 40.

Multiple-Use Sustained-Yield Act of June 12, 1960: The *Forest Plan* is the primary vehicle for implementation of the Multiple-Use Sustained-Yield Act in that it provides for the coordinated multiple-use management of the various resources and uses including recreation, wildlife and fish, range, timber, watershed, minerals, and wilderness (Record of Decision, Final Environmental Impact Statement, Land and Resource Management Plan, Colville National Forest, page 1). This project is consistent with the Multiple-Use Sustained-Yield Act because it implements the *Forest Plan*: The project manages the timber resource for continued and sustainable wood fiber production on suitable Forest Plan Management Areas, and it contains project design elements and mitigation measures that ensure continued use and production of the National Forest resources listed in the Act.

Organic Administration Act of 1897: This project is consistent with the Organic Administration Act because it (a) works to improve and protect the forest (see Purpose and Need in EA, pages 4-8); (b) it has no significant adverse effect on conditions of water flows (see EA pages 77-89 and Hydrology Report in project file); and (c) it contributes to the supply of timber for the use and necessities of citizens of the United States (see EA pages 158-159, and Economics Report in project file).

Endangered Species Act: The project is consistent with the Endangered Species Act. A Biological Evaluation was prepared which assessed and disclosed the effects on Threatened, Endangered, and Sensitive plant and animal species (in project file). Also see EA pages 89-125 for terrestrial wildlife; page 89 for fish; and pages 151-153 for plants. The U.S. Fish and Wildlife Service concurred with the biological assessment (letter in project file).

Direction Letter for Neotropical Migratory Birds: The project is consistent with various requirements for conservation of migratory birds. See EA pages 104-106 and Wildlife Report in project file.

Clean Air Act of August 7, 1977: The primary objective of the Clean Air Act is to establish federal standards for air pollutants from stationary and mobile sources, and to work with the states to regulate polluting emissions. The Act is designed to improve air quality in areas of the country which do not meet federal standards and to prevent significant deterioration in areas where air quality exceeds those standards.

The act requires states to develop state implementation plans, which set limits on emissions to assure that air quality within the state will meet the National Ambient Air Quality Standards. By including requirements for approval from the Washington State Department of Natural Resources prior to fuel reduction ignitions, and by Washington State Department of Ecology monitoring of dust potentially created during rock crushing operations, the project is consistent with the Clean Air Act. See EA pages 70-72 and 162, and Fuels Report in project file.

Federal Land Policy and Management Act of 1976 (FLPMA): This act pertains to the Forest Service when a project involves acquisition of public lands, acquisition of access to public lands, land exchanges, grazing permits and fees, and grants of rights-of-way through public lands. Alternative B included pursuing a legal right-of-way across private property into Units 18 and 19; however, Units 18 and 19 are not included in the selected action (Alternative C-Modified) so a legal right-of-way will not be pursued. Therefore, there are no actions in the Vulcan Project that come under the jurisdiction of FLPMA.

Healthy Forest Restoration Act of 2003 (HFRA): In order for the HFRA to be applicable, a project must be an authorized hazardous fuel reduction project as defined in the Healthy Forest Restoration Act. Such a project must:

- Use measures and methods described in the definition of “appropriate tools” contained in the glossary of the *Implementation Plan for the Comprehensive Strategy for a Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment*, dated May 2002;
- Be on Federal land as described in HFRA Section 102(a); and
- Be conducted under the provisions of HFRA Sections 103 and 104.

Because the environmental analysis for this project was not conducted under the provisions of HFRA Sections 102(a), 103, or 104, it is not an authorized hazardous fuel reduction project; therefore the HFRA does not apply.

Finding of No Significant Impact

I have determined through the *Vulcan Management Project Environmental Assessment* that this is not a major federal action individually or cumulatively that would significantly affect the quality of the human environment; therefore an Environmental Impact Statement is not needed. This determination is based on analysis of the context and intensity of environmental effects, including the following factors:

1. Analysis of the beneficial and adverse impacts (see EA Chapter 3 for full discussion of beneficial and adverse effects):

Beneficial Effects	Adverse Effects
<p>Timber Vegetation -- Treatments would restore the Douglas-fir and dry subalpine fir biophysical environments to structural stage, vigor, and densities that better represent tree densities similar to the natural fire regimes in both the WUI and non-WUI.</p> <p>Treatments would reduce stand density, which would reduce the stress on the stands, decrease the potential for insect and disease outbreaks, and increase resilience to wildfire.</p> <p>Prescribed burning coupled with mechanical vegetation treatments will reduce the potential for damaging forest pests and uncharacteristic wildfire damage.</p> <p>Linking the burn only treatments with the harvest-burn treatments would provide corridors of reduced fuels in the WUI.</p>	

Beneficial Effects	Adverse Effects
<p>Forest Fuels --</p> <p>There would be an overall reduction of forest fuels and decreased risk for severe wildfire effects. Forest resources, including air, water, soils, wildlife habitat, native vegetation, range improvements, and heritage sites would benefit from a reduced potential for severe wildfire.</p> <p>Tree canopies would be thinned to reduce crown fire potential. Dead and downed fuel accumulations would be reduced, lowering fire intensity.</p> <p>Seedlings and saplings would be reduced in number so that dense thickets would be less likely to provide ladder fuels.</p> <p>Fire suppression in the WUI could be attempted with greater success by ground forces due to lower flame lengths. Air resources would be able to more easily suppress fires where timbered canopies have been opened up to allow aerial retardants and water to penetrate to the ground.</p> <p>State and private natural resources and property adjacent to National Forest System lands would face reduced threat from severe wildfire effects. Wildfire moving off of adjacent lands and on to national forest and vice versa could be more easily controlled.</p>	<p>Because fire has been absent from the watershed for several rotations, some damage to the residual stand would be likely as fire burns off layers of accumulated needle duff, seedlings, saplings, and mistletoe brooms. Some mortality could occur in trees that are heavily infected with dwarf mistletoe and in thickets of understory trees. Design elements for Vegetation Management (EA pages 31-32) should minimize detrimental effects due to fuels reduction activities.</p> <p>Since burning is an unpredictable process, a certain amount of damage to trees would be expected. Burns that are too hot may burn tree tissue and encourage insect attacks. Weakened trees may become more susceptible to secondary pathogens like turpentine and Douglas-fir bark beetles. Anchor roots could be burned causing trees to fall over. If burning becomes too hot, soil organic matter may be volatilized and site productivity could be reduced. However, burning within prescription is not likely to damage large numbers of trees, or reduce soil organic matter to below recommended nutrient levels.</p>
<p>Economics --</p> <p>Modified Alternative C should provide approximately 9.0 million board feet.</p> <p>Delivered wood-product value should exceed logging costs and produce sufficient revenue to offset most non-timber sale project costs (i.e., fuel reduction, pre-commercial thinning, and other sale improvement activities).</p>	

Beneficial Effects	Adverse Effects
<p>Water --</p>	<p>Soil erosion from roadwork is expected to be short-term and remain within <i>Forest Plan</i> guidelines and directives.</p> <p>Equivalent Clearcut Areas (ECA)³ vary in subwatersheds due to timber harvest and road construction. No changes to flow regimes⁴ are anticipated that would result in damage to stream channels. Most proposed harvest and prescribed burn units are located in the snow dominated precipitation zone, making the risk of flooding due to rain-on-snow events low. Channel conditions in most of the project area are stable. All subwatersheds (except Little Goosmus Creek) should remain below the Forest threshold of concern (25%) in all alternatives. The ECA modeled in Little Goosmus Creek may increase from 25% to about 33% over the next 15 years. Stream channels and riparian vegetation are stable and intact throughout much of the basin and therefore capable of handling any increased flows that may result from vegetation treatments. The proposed increases in created openings in Little Goosmus Creek are not anticipated to result in detectable changes to flow regimes and/or channel morphology.</p> <p>Short-term sedimentation and turbidity levels would increase by a minor amount during road construction, reconstruction, maintenance, and timber haul. Some of this material would be deposited in downstream floodplains and connected wetlands. No changes to groundwater function are anticipated from either action alternative.</p> <p>No direct effects on water quality are expected from the proposed activities (either harvest or burning). Water quality is expected to continue to meet state criteria on federal lands.</p>

³ The **ECA** is the area of a watershed in a 'clearcut' condition at a specific point in time. Past vegetation manipulation treatments and natural disturbance events that have the potential to affect the water yield of a watershed are converted to an equivalent clearcut area, added to alternative proposed treatments, and expressed as a % of the total watershed area.

⁴ **Flow regime** refers to seasonal pattern of stream flow over the year (Gordon et al. 1992).

<p>Wildlife</p> <p>Northern Leopard Frogs, Beaver, Common Loons, Grebes, Great Blue Herons, Ferruginous Hawks, Sandhill Cranes, Pygmy Whitefish, Interior Redband Trout, West-slope Cutthroat Trout, Bull Trout, Woodland Caribou -- These species do not occur in the project area, so there would be no impact to these species. Bull trout, west-slope cutthroat trout, purebred interior redband trout and pygmy whitefish are not known to inhabit the Vulcan watershed. Woodland caribou within the Selkirk Ecosystem exist only in the extreme northeastern corner of the State, separated from the watershed by the Pend Oreille River and the mountains between the watershed and the river.</p>	
<p>Big Game – Forage conditions both within and adjacent to the designated winter range would improve and prove more attractive to wintering ungulates.</p>	<p>Winter logging could cause short term impacts to big game on their winter range. Modifications to Alternative C include a design element that would help reduce this potential adverse impact.</p>
<p>Barred Owl, Pileated Woodpecker, Pine Marten, and Northern Three-toed Woodpecker</p> <p>-- Timber harvest prescriptions and identified connectivity corridors would protect or enhance existing barred owl, pileated woodpecker, pine marten, and northern three-toed woodpecker management areas, and promote healthier, more resilient timber stand conditions that would continue to provide for these species in the future.</p> <p>Portions of both MA-1 areas would be managed to support more open-grown, large trees on appropriate sites. Although prescribed fire would not enhance the area for pine marten, this warm dry area does not contain marten habitat. Prescribed fire would maintain the MA-1 area as habitat for pileated woodpeckers. No commercial harvest or other activity other than prescribed fire would occur in either MA-1 area.</p>	
<p>Blue Grouse – The partial harvest of trees on more open, dry sites that occur in both action alternatives would have a beneficial effect to blue grouse nesting and brood habitat by opening the overstory and understory.</p> <p>The <i>Forest Plan</i> requires retaining trees larger than 21-inch diameter at breast height, so larger roost and forage trees would not be affected. If at least 8 roost trees per acre are retained, the action alternatives would not cause an area-wide decrease to blue grouse habitat</p>	<p>The 0.2 miles of road built into blue grouse habitat may increase the amount of noxious weeds and decrease forage for blue grouse.</p> <p>Prescribed fires would enhance blue grouse habitat but also may spread noxious weeds.</p> <p>The noxious weed design elements added or modified in Modified Alternative C should help reduce the spread of noxious weeds within the planning area due to the project.</p>
<p>Franklin’s Grouse -- Commercial thinning in early structural stage stands probably would not greatly affect Franklin’s grouse either positively or negatively.</p>	<p>Prescribed fire would be expected to cause minimal negative effects on existing Franklin’s grouse habitat.</p> <p>Precommercial thinning would decrease habitat quality for Franklin’s grouse, but the retention of 10% of the units in an unthinned condition should somewhat mitigate that loss.</p>
<p>Other Woodpeckers -- Harvest in the Structural Stage 6 stands, if loss of snags can be minimized, would</p>	<p>The number of large snags throughout the harvest units would decrease in the short-term. Past harvests have</p>

<p>enhance habitat for those species that require more open-grown, large trees. The proposed harvest would also improve the longevity of existing snags because smaller trees will be cleared from around the large snags.</p>	<p>eliminated or reduced snags, especially large snags. Past road building and the firewood policy of allowing snags to be harvested within 200 feet of open roads eliminated or continues to suppress snag levels. The proposed project would add little to the cumulative negative effects of reduced snag levels because non-sawtimber would remain on site, new roads would be closed after harvest activities, green trees remaining on site should develop into snags in the future, and the Forest Service would create snags in units that fall below standards in the <i>Forest Plan</i>.</p>
<p>Large Raptors – Raptors would benefit from more resilient forest conditions that should continue to provide raptor nesting opportunities.</p>	<p>Commercial thinning harvest is proposed in the unit that contains a historical goshawk nest. Monitoring of the nest site would continue and appropriate buffers established if the nest again becomes active as per the design element added by this decision.</p>
<p>Waterfowl -- Because the area provides extremely poor habitat for waterfowl, and because National Forest System lands are more than ½ mile from the Kettle River, the Selected Alternative would not affect waterfowl, either positively or negatively.</p>	
<p>Migratory Birds – Loss of habitat effects have been proportionally greater in those habitats that historically have been transitory in nature and/or in limited supply such as openings, shrub fields, riparian habitats, early successional forests, and single stratum forest types. Project activities would maintain or improve these types of habitats and contribute cumulatively to the perpetuation of bird species that require these conditions, and also contribute to the maintenance of the area’s bird species diversity.</p>	<p>A few nests could be destroyed during spring underburning, but improved habitat conditions for those species that occupy more open sites would compensate for this temporary loss.</p> <p>Within treatment units, habitat for those species that prefer dense, younger stands would decrease, although suitable and sufficient habitat remains on the landscape so that these species would not exhibit a population decline.</p>
<p>Gray Wolf -- The project would be expected to benefit ungulate prey species due to improved forage conditions.</p>	<p>No adverse effects on wolves are likely.</p>
<p>Grizzly Bear -- Prescribed fire units would open the stands to more historic conditions, conditions in which bears evolved, so would not negatively affect the ability of bears to move through the area.</p> <p>Project treatments would improve forage conditions for grizzly bears.</p>	<p>No adverse effects on grizzly bears are likely.</p>
<p>North American Lynx -- Forage habitat conditions would be improved in the long term.</p>	<p>No adverse effects on lynx are likely.</p>
<p>Bald Eagle -- Bald eagles are not likely to be affected by project activities, either positively or negatively.</p>	
<p>Peregrine Falcon -- There would be no effect to peregrine</p>	<p>No adverse effects on peregrine falcon are likely.</p>

<p>falcons or their habitat.</p>	
<p>California Wolverine – Wolverines would benefit from an increase in the variety of habitat types and amounts of habitat similar to historical conditions and improved forage conditions for prey.</p>	<p>The project may affect individual wolverine, but “will not lead in a trend towards federal listing or loss of viability.”</p>
<p>Pacific Western Big-eared Bat – Foraging conditions will likely be improved.</p>	<p>The project may affect individual Pacific western big-eared bats, but “will not lead in a trend towards federal listing or loss of viability.”</p>
<p>Pacific Fisher -- Travel corridors would retain sufficient cover to allow fishers to move throughout the planning area. All harvest prescriptions call for some form of commercial thinning and are designed to move the stands towards late structural stage more rapidly than if harvest did not occur. Thus, over time, the project area should provide better fisher habitat conditions than currently exist.</p>	<p>Project activities may impact individual fisher or habitat, but are “not likely to result in a trend toward federal listing or loss of viability for the population or species”.</p>
<p>Great Gray Owl – Modified Alternative C provides opportunities to maintain and improve existing habitat conditions and restore under-represented habitat such as large trees, late and old stand structures, as well as promote healthier, more resilient forest conditions across the project area.</p> <p>Modified Alternative C contains measures that would be expected to perpetuate the type of habitat conditions reported as suitable for great gray owl foraging and nesting over the long term.</p>	<p>All action alternatives, including Modified Alternative C would have the potential to negatively affect great gray owl habitat by altering nest site availability and/or affect unknown nests, however there are numerous design elements within Modified Alternative C that insure that potential great gray owl habitat would persist in this area.</p> <p>Project activities may impact individual great gray owls or their habitat, but are “not likely to result in a trend toward federal listing or loss of viability”.</p>
<p>Soils --</p>	<p>The construction of roads, landings and rock pits is considered an ‘irreversible effect’ on soil productivity as described in 40 CFR 1502.16. Roads and landings can be obliterated and some productivity restored; however, full productivity would not be restored for many years until organic matter returns, the soil’s ability to support root growth has redeveloped, an A horizon develops, and soil processes are re-established.</p> <p>Erosion rates and the chance that sediment would enter a stream from harvest activities are highest in the first year following treatment. In the year following the prescribed fire (the only year sediment is significantly elevated) a 15-year storm (6.6% chance) in the burned scenario may have sediment yields similar to a 30-year storm (3% chance) if the area were unburned. If the burned area experiences a 30-year storm (3% chance), sediment delivery may be 4 times the sediment yield of a 100-year storm in the unburned state. However, the amount of sediment that would reach the stream varies by treatment.</p> <p>With sufficient slash or snow, a Cut-To-Length activity area would experience about 8-12% detrimental compaction. A design element would be included in Modified Alternative C to prevent the use of a Cut-To-</p>

	<p>Length system unless the unit has sufficient slash or snow.</p> <p>Most of the soils in the analysis area, and most of the soils proposed for ground-based harvest treatments have a high potential for compaction when moist. With 130-foot skid trail spacing, this project would detrimentally compact about 10% of the activity area. All heavy equipment would be required to remain on the designated skid trails unless permitted by the Forest Soil Scientist or their designee on a case by case basis. By limiting the extent of these trails, the project would limit the extent of detrimental soil conditions.</p> <p>High intensity fires may volatilize soil nutrients such as nitrogen and sulfur. The fire intensity proposed in Modified Alternative C should not be high enough to volatilize an appreciable amount of these plant nutrients. Typically cation plant nutrients (e.g., potassium, calcium, etc.) do not volatilize at the temperatures expected in these treatments. They remain in the ash, where they may be leached into the soil. Because of the amount of organic matter to be left on the site, appreciable leaching would not be expected to occur.</p> <p>The cumulative effect of this project, when combined with past projects, would continue to meet the <i>Forest Plan</i> standard with regard to detrimental soil conditions.</p>
<p>Noxious Weeds –</p>	<p>Harvesting activities would create landings and skid trails where soil is exposed and becomes open to noxious weeds invasion. Burning may also create exposed soil where noxious weeds may spread or invade. Equipment used in road maintenance or timber harvesting may bring in noxious weeds or seeds from other areas.</p> <p>There would be an estimated 437 acres of disturbed soil available for invasion by noxious weeds under Alternative C (see pages 140-147 of the EA). Under Modified Alternative C, there would be a slight increase in estimated disturbed soil due to the addition of 27 harvest acres and 0.21 miles of light road reconstruction. However, design elements added to, or modified in, Modified Alternative C should help reduce potential weed spread below that predicted in Alternative C.</p>

<p>Air --</p>	<p>Smoke may be seen from controlled burning of both natural fuels units and slash created in commercial thinning units. Most of the smoke would be generated during the first few hours of the controlled burn, tapering off as the fuels are consumed. Ignition is generally stopped before evening so smoke would have a chance to dissipate. Smoke from residual burning may settle into the valleys during the night.</p> <p>The prescribed fire activities proposed in the Vulcan Project area are not expected to have any irretrievable or irreversible effects to the local air quality.</p>
<p>Heritage --</p>	<p>Four heritage Management Class 2 sites have the potential to be affected. Project activities would have the potential to damage or destroy these sites directly by heavy machinery, falling trees, road building, fuels treatments, etc., or indirectly as a result of discovery and increased access to each site. Design elements requiring a buffer be left around each one of the sites would protect the Management Class 2 sites.</p>
<p>Range -- This alternative would improve grazing opportunities in transitory range. The creation of 2,227 acres of more-open stands available to cattle would improve forage availability for livestock. This would be expected to last for 10-15 years depending on when early structure stand tree canopies close and older structure stands' understories regenerate.</p>	<p>The greatest impacts to use of primary range would be with spring burning (after May 1) and prior to October 15. A design element to eliminate burning during this period and burning less than 1/3 of the area per year in pastures 1 and 2 would reduce the impacts to permittees (Range Design Elements numbers 1 and 2).</p> <p>There would be no access to riparian areas created by new road construction under Modified Alternative C. There would also be no new accessible riparian areas created because of harvest or burning.</p>
<p>Recreation --</p>	<p>In the short term, a reduced quality of the recreation experience could result from noise, dust and smoke. The presence of harvesting equipment and log trucks should be expected to last 3 to 5 seasons and could result in displacement of visitors wishing to visit a quiet forest setting.</p>
<p>Public Health and Safety --</p>	<p>Smoke in large amounts would not be expected to affect the general public because burning would only be carried out when smoke will be readily dispersed into the upper atmosphere. Also, the public is not expected to enter areas where burning is actively in progress because signs warn against public entry. Smoke in lesser amounts, as may occur when smoke settles into valley bottoms during evening hours following prescribed burns could reduce visibility. It is not expected that visibility would be reduced to the extent that driving safety would be impaired. Valley-bottom smoke could also adversely affect the breathing of a small number of susceptible individuals. The Forest Service routinely announces to the public in advance when burning is to take place, so</p>

	<p>that susceptible individuals can take the necessary precautions to avoid adverse health effects.</p> <p>The general public is routinely advised (with warning signs) to stay out of active prescription burn areas. During aerial ignitions, no one is allowed inside the ignition area. As a result, the risk to the general public from prescribed burning operations is very small. In addition to smoke (discussed above), there are physical hazards during fire use including fire, embers, falling trees, contact with ignition materials, and undermined soils. Safety precautions mentioned above would reduce the likelihood of the general public accessing a prescribed fire during operations.</p>
<p>Dust --</p>	<p>During dry periods when unpaved roads are used in conjunction with any activity associated with the project (especially log hauling and rock pit blasting, drilling, and crushing), dust would occur. In most cases, dust is not considered a serious health and safety hazard. However, in severe instances (which are occasionally associated with log hauling), visibility could be severely reduced, and breathing, especially in certain individuals, could be adversely affected to those driving on those roads.</p>
<p>Sensitive Plants –</p>	<p>Canopy removal and prescribed burning have potential to adversely affect sensitive plants in Units 31, 39, and N. With application of design elements (EA pages 33-34), it is anticipated that the sensitive plant populations would maintain at least their present population levels and viability.</p> <p>Modified Alternative C may have an impact on individual plants, but is not likely to cause a trend to federal listing or loss of viability because design elements would be implemented.</p>

<p>Visual Quality --</p>	<p>At all viewing zones except the immediate foreground, it is expected that timber cutting treatments would be seen as nothing more than a textural change in the forest canopy.</p> <p>Hand pile, machine pile, and landing pile burning have the potential to scorch nearby trees or tree limbs, and leave a blackened area on the ground where the pile burned. Scattered orange foliage on conifer trees and spots of blackened ground could be visible. It is expected that the visual effect would only last for a few seasons until scorched needles fall and vegetation becomes re-established in burned spots.</p> <p>Underburning has the potential to blacken tree trunks, low branches and the ground, and turn low-hanging tree foliage orange. The effect may be visually dramatic immediately following the burn, but the effect becomes less as scorched foliage drops and understory vegetation re-grows, usually within a few seasons after the burn. The visual effects of underburning are usually minimal to the casual observer in five years or less.</p> <p>At the foreground viewing distance, the visual effects of prescribed burning would be as described above, and would be expected to meet the Partial Retention Visual Quality Objective (VQO) (see example of Partial Retention – Underburn on page H-29 in <i>Landscape Aesthetics, a Handbook for Scenery Management</i>, USDA Forest Service Agriculture Handbook Number 701). As the viewing distance increases, the visual effects would become less evident. At the middle ground viewing distance, one would be likely to see only occasional black or orange tree crowns widely scattered through the green forest canopy; the result of trees that torched or became excessively heated/scorched during the burn. At the background viewing distance, little if any visual effect should be discernable.</p> <p>While much of the Vulcan Project activities are expected to be visible from the travel ways and use areas of concern, all the project activities are expected to meet Partial Retention VQO. As a consequence, there would be little added visual effect. The overall characterization of “large stands of continuous tree cover or areas broken by natural or man-made openings” and an overall appearance described as “a mixture of natural-appearing and logged forestlands” would not change as a result of the Vulcan Project.</p>
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<p>Effects on Tribes of the Colville Reservation -</p> <p>The Vulcan Project would not affect access to the area because no new road closures are proposed. Hunting may be improved as mule deer habitat would be improved and sight distances increased in treated stands. Traditionally gathered plants may be improved with the opening of closed forest canopies and reintroduction of fire. Fishing would not be affected.</p>	
<p>Effects on Consumers, Civil Rights, Minority Groups and Women (Includes Environmental Justice Analysis) –</p> <p>The action alternatives would contribute to consumers, but only in a limited capacity. All action alternatives would provide wood products to one or more area sawmills, thus contributing raw materials that would become available to consumers. Because the amount of such material is small when compared to the regional wood products market, making this material available to the market would not measurably affect the price or availability of finished wood products.</p> <p>All contracts and employment offered by the Forest Service contain Equal Employment Opportunity requirements. Therefore, no adverse or discriminatory effects to Civil Rights, Minority Groups or Women are expected with regards to access to federal contracts or jobs.</p> <p>Changes in the availability of firewood would likely affect low-income residents more than others because alternate sources of heat are more costly. The Vulcan Project would temporarily open several roads for timber harvest, and leave these roads open for a short firewood-gathering period. Firewood (snags and downed wood behind road closures, and logging slash created by the project) would be more available for a few years as a result of the Vulcan Project.</p>	

2. The degree to which the proposed action affects public health and safety:

There are a number of health and safety hazards to Forest Service Employees, private contractors involved with carrying out the Selected Action, and the general public. None are unusual or unique to the Vulcan Project. These are discussed in the EA on pages 161-163, and include discussions of effects related to Smoke, Dust, Increased Traffic, Logging Hazards, Prescribed Burning Hazards, Weed Treatments, Improved Road Safety, and Reduced Wildfire Risk.

3. The unique characteristics of the geographic area:

The Vulcan Project area contains no unique characteristics or features. See discussion on EA page 163.

4. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks:

There were no highly uncertain, unique, or unknown risks identified for the Vulcan Project (EA page 163).

5. The degree to which the action may establish a precedent for future actions with significant effects:

None of the selected actions set precedents. See discussion on EA page 163.

6. Whether the action is related to other actions with individually insignificant, but cumulatively significant impacts:

Each effects analysis contained in the EA discusses cumulative effects; none are significant. For Timber Vegetation, see EA pages 43-46 and 64; for Forest Fuels, see EA pages 43-46 and 70; for Water, see EA pages 85-89; for Big Game, see EA pages 92-93; for Blue Grouse, see EA pages 97-98; for Franklin's Grouse, see EA page 99; for Other Woodpeckers, see EA pages 102-103; for Large Raptors; see EA page 104; for Waterfowl, see EA page 104; for Migratory Birds, see EA pages 105-106; for Bald Eagle, see EA page 110; for North American Lynx, see EA pages 116-117; for Peregrine Falcon, see EA pages 117-118; for Wolverine, see EA pages 120-121; for Pacific Western Big-eared Bat, see EA page 122; for Pacific Fisher, see EA page 123; for Great Gray Owl, see EA page 125; for Soils, see EA pages 137-138; for Noxious Weeds, see EA pages 146-147; for Air Quality, see EA page 72; for Range, see EA pages 46 and 149-150; for Sensitive Plants, see EA page 153; for Heritage, see EA pages 46 and 148; for Visual Quality, see EA pages 46 and 158.

7. The degree to which the action may affect scientific, cultural, or historical resources.

There are no scientific resources in the Vulcan Project Area. The effects on cultural or historical resources are discussed in the EA on pages 147-148. The project has been certified as complying with Section 106 of the National Historic Preservation Act.

8. The degree to which the action may adversely affect endangered or threatened species or habitats:

The effects on endangered or threatened species and their habitats are discussed in the *Biological Evaluation* in the Analysis File, with results summarized in the EA on pages 89 and 106-117.

Endangered or threatened species which may inhabit the area will not likely be adversely affected. These include the gray wolf (endangered), grizzly bear (threatened), and North American lynx (threatened). The selected action is expected to have no effect on bull trout (threatened).

The U.S. Fish and Wildlife Service (May 14, 2007) has concurred with the Biological Evaluation's findings.

9. Whether the action threatens a violation of environmental laws or requirements.

The Vulcan project has been examined in relation to a number of environmental laws and requirements, and has been found to be in compliance in all cases. Discussion of compliance with environmental laws or requirements was discussed on the following EA pages:

- the Clean Water Act (EA page 78 and Vulcan Projects Environmental Analysis Hydrology Report in project file),
- the National Historic Preservation Act (Colville National Forest Section 106 Compliance form in project file),
- the Endangered Species Act (EA pages 89, 106-117 for terrestrial wildlife; page 89 for fish; and pages 151-153 for plants, and May 14, 2007 USFWS concurrence letter in Analysis File),
- the National Environmental Policy Act (EA in its entirety),
- the National Forest Management Act (Vulcan Silviculture and Soils reports in project file),
- the United States Clean Air Act (EA pages 70-71 and Vulcan Management Project Fuels Report in project file).

There are no known significant irreversible resource commitments or irretrievable losses of timber production, wildlife habitats, or water quality. Irreversible effects were identified for soils (EA pages 130 and 133).

Prime farmlands, prime rangeland, wetlands and floodplains near the planned actions will not be significantly affected (see EA page 160).

Consumers, civil rights, minority groups, and women will not be significantly affected (see EA pages 159-160).

Appeal and Implementation

This project will not be implemented for 50 days from the date the legal notice of this decision appears in the *Colville Statesman Examiner* newspaper (Colville, Washington). The Vulcan Timber Sale is expected to be offered for sale in late summer or fall of 2007; and burning may be initiated in Fall 2007 or Spring 2008.

This decision is subject to appeal pursuant to 36 CFR 215. Individuals or organizations who provided comment or otherwise expressed interest by the close of the comment period may appeal this decision. The notice of appeal must be filed with the Regional Forester, ATTN: 1570 APPEALS, P.O. Box 3623, Portland, Oregon, 97208-3623, within 45 days of the date the legal notice of this decision appears in the *Colville Statesman Examiner*.

Any written notice of appeal of the decision must be fully consistent with 36 CFR 215.14, "Appeal Content." It is the appellant's responsibility to provide sufficient project- or activity-specific evidence and rationale, focusing on the decision, to show why the Responsible Official's decision should be reversed. At a minimum, an appeal must include the following:

1. Appellant's name and address (§ 215.2), with a telephone number, if available;
2. Signature or other verification of authorship upon request (a scanned signature for electronic mail may be filed with the appeal);
3. When multiple names are listed on an appeal, identification of the lead appellant (§ 215.2) and verification of the identity of the lead appellant upon request;
4. The name of the project or activity for which the decision was made, the name and title of the Responsible Official, and the date of the decision;

5. The regulation under which the appeal is being filed, when there is an option to appeal under either this part or part 251, subpart C (§ 215.11(d));
6. Any specific change(s) in the decision that the appellant seeks and rationale for those changes;
7. Any portion(s) of the decision with which the appellant disagrees, and explanation for the disagreement;
8. Why the appellant believes the Responsible Official's decision failed to consider the substantive comments; and
9. How the appellant believes the decision specifically violates law, regulation, or policy.

It is the responsibility of persons making an appeal to submit it by the close of the appeal period. It is the responsibility of persons submitting appeals by electronic means to ensure that their appeal has been received. The appeal must have an identifiable name attached or verification of identity will be required.

The notice of appeal must be filed hard copy with the Appeal Deciding Officer, Regional Forester, ATTN: 1570 Appeals, 333 SW First Ave., PO Box 3623, Portland, OR 97208, or sent electronically to **appeals-pacificnorthwest-regional-office@fs.fed.us**. The appeal must be postmarked or delivered within 45 days of the date the legal notice for this decision appears in the Colville Statesman Examiner newspaper. The publication date of the legal notice in the Colville Statesman Examiner is the exclusive means for calculating the time to file an appeal and those wishing to appeal should not rely on dates or timeframes provided by any other source.

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, 5 business days from the close of the appeal filing period. When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

For further information, contact Linda Fee, Colville National Forest Republic Ranger District Ranger, at Republic Ranger District, 650 East Delaware, Republic, WA 99166 or at (509) 775-7400.

Signature of Responsible Official and Date Signed

/s/ Rick Brazell

RICK BRAZELL
Forest Supervisor
Deciding Official

June 29, 2007

Date

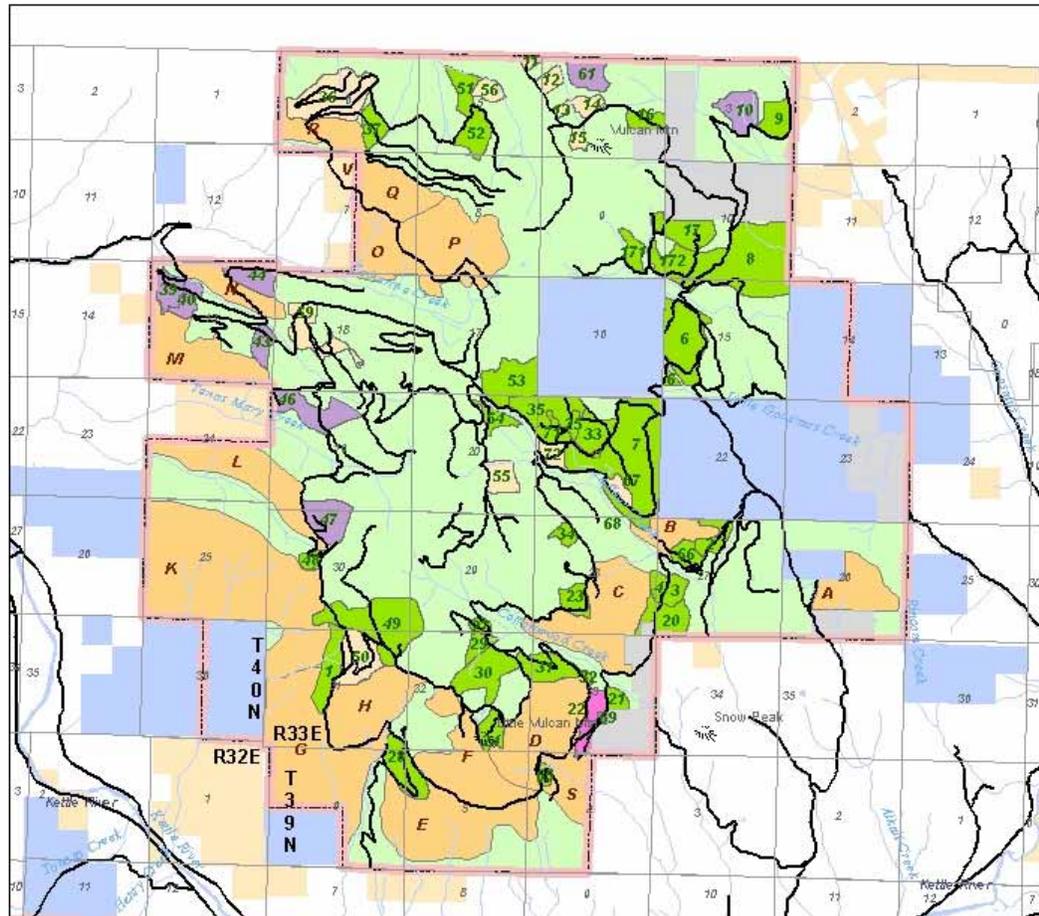
Appendix A

Corrections to the Vulcan Vegetation Management Project Environmental Assessment

Chapter	Page	Changes/Additions
1	5	Change “See Map C, Vulcan Project WUI Area Map on page 5...” to “See Map C, Vulcan Project WUI Area Map on page 6...”
2	28	Soil and Water, 2. Clarify that Forest Service permission is granted on a case by case basis by the Forest Soil Scientist or their designee.
2	33	Recreation, 2. Replace in entirety with: “Warning signs that conform to Manual of Uniform Traffic Control Devices specifications would be placed in conjunction with harvest activities informing forest visitors of the activity.”
2	37	Visual Quality, 3. replace “released’ with “ <i>accepted</i> ” to be consistent with contract language.
3	59	Timber Harvest Treatments. Change “In the wildland-urban interface (WUI) (see map, Chapter 1 page 2)” to “(see Map C, Chapter 1 page 6).”
Appendix A	176	PT-11, Explanation. Clarify that requests reviewed and considered on a case-by-case basis are reviewed and considered by the Forest Soil Scientist or their designee.
Appendix A	177	PT-14. Explanation. Add “ <i>where necessary</i> ” to the statement beginning “For all tractor units, designated skid trails...”
Appendix A	179	PT- 18, Implementation and Responsibility. Replace “released” with “ <i>accepted</i> ” to be consistent with contract language.
Appendix A	180	PT-21, Explanation. Remove reference to “certified by a registered professional engineer,” as recent CFR changes have streamlined the rules regarding these requirements.
Appendix B	195	The legend on page 195 is modified as follows: “CT” is added to the legend and stands for commercial thinning. “PCT” is added to the legend and stands for pre-commercial thinning. “SPT” is added to the legend and stands for small pole thinning. “WF” is added to the legend and stands for whip felling.

Appendix B

Modified Alternative C Unit Map



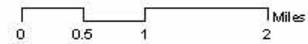
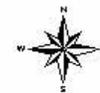
Legend

Prescription

- Commercial Thin
- Commercial Thin/Precommercial Thin/Release
- Precommercial Thin
- Small Pole Thin
- Natural Fuels Underburn

Vulcan Project Modified Alternative C Unit Map

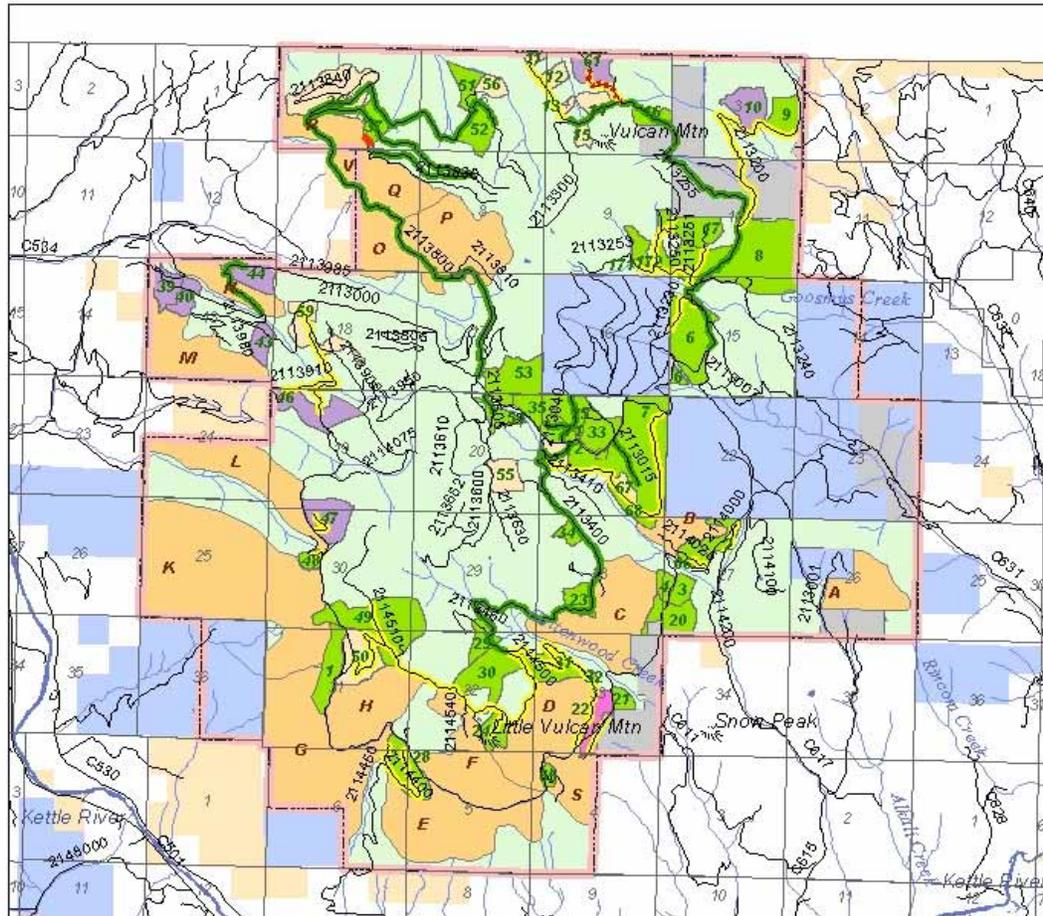
Republic Ranger District
Colville National Forest



CGP/kw 06/29/2007

Appendix C

Modified Alternative C Transportation Map

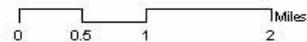


Legend

-  Light Reconstruction
-  Medium Reconstruction
-  New Construction
-  Unauthorized Road Location

Vulcan Project Modified Alternative C Transportation Map

Republic Ranger District
Colville National Forest



CGP/kw06/29/2007