

# Decision Notice and Finding of No Significant Impact for the Westside Collaborative Vegetation Management Project

USDA Forest Service  
Darby Ranger District  
Bitterroot National Forest  
Ravalli County, Montana

T.5N. R.21W. Secs. 16, 21, 27, 28, 32, 33 P.M; T.4N. R.22W. Secs. 1, 12; and T.4N.,  
R.21W. Secs. 4-8, 17, 18 PM

## Summary of the Decision

This Decision Notice (DN) documents my decision to implement Alternative 2 as described in the Westside Collaborative Vegetation Management Project Environmental Assessment (Westside EA). No project activities proposed in Alternative 2 occur on private lands within the Westside Project area boundary; they all occur on National Forest. This DN includes a discussion of my rationale for choosing Alternative 2, and the Finding of No Significant Impact (FONSI) documents the EA is the appropriate level of analysis.

I have decided to authorize commercial and non-commercial forest treatments, including prescribed burning, on approximately 2,327 acres of National Forest in the Westside project area. My decision includes the construction of approximately 3.8 miles of permanent National Forest System road and 3.8 miles of temporary road, treatments in the Selway-Bitterroot Inventoried Roadless Area (IRA), the application of design features and best management practices (Table DN-4, Appendix A), and Forest Plan amendments for elk habitat effectiveness, coarse woody debris, and visual quality (Appendix B). The new permanent roads will be closed year-long to motorized travel and the temporary roads will be reclaimed following use. The new roads will establish long-term administrative access to portions of the project area and their management will preserve the investment in the road and maintain elk habitat effectiveness.

My decision is based on the information contained in the Westside EA, supporting information in the project file, public comments received through the National Environmental Policy Act (NEPA) scoping and comment processes, and objections received through the pre-decisional review process.

## *Considerations following the Pre-decisional Review Process*

I received 16 objections on the draft Westside Decision Notice and FONSI. The main issues with the Westside project were:

- 1) the perceived lack of collaboration
- 2) the use of Blue Jay Lane and Hayes Creek Road for log haul and potential impact on the road and adjacent residents
- 3) Commercial harvest in Units 2a, 2b, and 2c and the need to construct roads and a bridge
- 4) Decommissioning roads and the potential that they have a R.S. 2477 rights-of-way
- 5) Marking trees and digging a soil test pit prior to a formal decision

- 6) Extend the project area to include the area east of Downing Mountain
- 7) The application of the Healthy Forest Restoration Act (HFRA) to the Westside project

In response to the objections, the Objection Reviewing Officer provided instructions for issues 2, 3, 4, and 5. He found that the Forest had correctly applied the titles and sections of HFRA to the project (Issue 7) and the collaboration efforts met the requirements of the HFRA (Issue 1). He also agreed that extending the analysis area by 13,000 acres would dilute the effects of the currently proposed project (Issue 6).

### **Issue 2: Use and maintenance of Blue Jay Lane and Hayes Creek Road**

The Objection Reviewing Officer instructed the Forest to work with Ravalli County and the residents along Blue Jay Lane and Hayes Creek Road to explore the various routes to haul logs and continue negotiations to resolve road maintenance issues. Any maintenance agreements are to be documented in a road maintenance agreement before maintenance is scheduled or implemented.

In response to this issue, Forest staff met with the residents of Blue Jay Lane and Hayes Creek Road on May 27, 2016 (PF-Public-Involve-057) and with representatives of the Ravalli County Commission on June 8, 2016 (PF-Agency-020). The Forest Service and residents of Blue Jay Lane and Hayes Creek Road discussed potential road improvements and mitigation practices to reduce dust and maintain the road. Ravalli County and the Forest Service have agreed in principle to incorporate Blue Jay Lane and Hayes Creek Road into the existing Forest Development Road Cooperative Agreement (26 May 1965) and Schedule A (2010) for the duration of the timber sale. A more detailed project work plan is being developed in collaboration with Ravalli County and the residents.

### **Issue 3: Commercial harvest in Units 2a, 2b, and 2c and the need to construct roads and a bridge**

The Objection Reviewing Officer found the rationale was clear for harvesting units 2a, 2b, and 2c in the EA. However, he instructed me to reconsider the various options for managing these units and the need for the roads and bridge.

In response to concerns about elk habitat expressed in open house comments and subsequent field visits, the interdisciplinary team (ID Team) determined that treatment in the west side of Unit 2a could be postponed until the next potential entry. A slope break defines the two sections of the unit. The west side of the unit is near the appropriate density and is developing uneven-aged structure, whereas the east side of the unit is uniform, even-aged ponderosa pine. Not treating the west side of the unit would retain forest structures beneficial to elk while developing similar structures on the east side of the unit. It would also reduce the amount of road construction needed during this entry. A drawback recognized by treating less area would be less fuel reduction. However, the area closest to the forest boundary would be treated and would likely be adequate to reduce fire behavior in the area of highest concern. Based on these considerations, we modified the proposed action by removing the west side of Unit 2a from the Alternative 2 description when the project was released for comment.

In response to the Objection Reviewing Officer's instructions, my staff discussed the potential for a permanent, unencumbered, public access into Units 2a and 2b with the adjacent landowner on May 27, 2016. Roads on National Forest accessed by the road on private land would require re-construction to accommodate log trucks. This investment would require some kind of surety that access would be available in the future. This type of enduring access is needed to ensure long-term management of the mid-portion of the project area (Units 2a, 2b, and 2c). The landowner was approached because existing roads provide direct access from his property. The landowner declined

and was not interested in providing permanent, unencumbered public access. Given the landowner's position, I have no other option than to construct the roads and bridge into this area.

The helicopter logging analysis is adequate and shows that using helicopters to yard logs from the project area at this time is not a viable option for planning a timber sale. As part of my decision, should a timber sale purchaser request to use helicopters, it could be allowed if the environmental impacts are less than those described in the Westside Collaborative Vegetation Management EA. However, the analysis shows that the bridge across Camas Creek and a portion of the roads would still be needed for hauling logs from the landings.

I have documented the rationale for my decision in a more complete description of the effects of choosing the No Action alternative, Alternative 1, in addition to the rationale presented in Table DN-7.

#### **Issue 4: Decommissioning roads and the potential that R.S. 2477 rights-of-way exist**

The Objection Reviewing Officer found the transportation analysis was complete except that it did not discuss or reference the County's Resource Plan and how the Westside project would mesh with it. He instructed the Forest to discuss in the EA and DN how the Ravalli County Resource Plan was considered when determining which roads could be closed.

During the analysis process, I read and considered the Ravalli County Natural Resource Policy. Goal 11 under Forest Management states, in part, "No existing public transportation system roads should be decommissioned unless there is demonstrated public support that the road is not needed for public recreation or for economically efficient management and fire protection purposes." The Forest Service considered the benefits and risks of every road in the project area when the ID Team discussed road management (PF-TRANSPORT-019). The benefits included considering whether the roads were important for fuels management, summer, fall, or winter recreation, vegetation management, fire suppression access, access to state or private lands, and commercial access. The risks considered included visuals, elk security, soils and water, and threatened and endangered species or their habitats. The roads analysis shows the roads proposed for decommissioning are redundant to NFSR 496 and have low values for commercial and recreation access (PF-Transport-019). The roads are not needed for efficient forest management or fire protection. Trees and shrubs grow on most of the roads proposed for decommissioning and the roads show no evidence of recreation or motorized use.

During the comment period, we received requests to retain NFSR 62961 on the system and accommodate the approved winter use on NFSR 62958. We modified the proposed action to retain 62961 and maintain the winter use route on 62958. While the analysis shows a small net loss in roads on the inventory (EA Table 2-7), there is no actual reduction in currently used roads. The roads proposed for decommissioning have grown in or are re-routed to avoid detrimental watershed effects.

Ravalli County also asserts that roads in the project area built prior to 1976 are subject to R.S. 2477. The reservation of Federal land for National Forest purposes acted as a complete withdrawal from entry and appropriation under the public land laws. Therefore, there can be no R.S. 2477 rights-of-way created after the date of Forest reservation. The lands in the Westside project area were reserved for National Forest purposes as part of the Bitterroot Forest reserve on February 22, 1897. R.S. 2477 rights-of-way cannot be established or created on the Bitterroot National Forest after this date.

### Issue 5: Marking trees and digging a soil test pit prior to a decision

The Objection Reviewing Officer recognized that Forest Service Manual direction (FSM 2432.21a) allows pre-implementation activities to occur prior to a decision but cautions about creating a false impression that the Responsible Official has made a decision before the release of the Decision Notice. The Objection Reviewing Officer reminded me to be aware of the impression pre-implementation activities may have on the public and to avoid creating a false impression that I have made a decision before releasing the Decision Notice.

To relieve the perception of a pre-determined decision, I

- reviewed the helicopter analysis and my assessment is described under Issue 3 above.
- instructed my staff to discuss road use and maintenance with Ravalli County and the residents on Blue Jay Lane and Hayes Creek Road. The results of these discussions are described under Issue 2 above.
- instructed my staff to discuss permanent, unrestricted, public access at key access points to National Forest with adjoining landowners. The results of this discussion are described under Issue 3.
- the pre-sale forester, Darby District Ranger, and I met with Michelle Dieterich, Jeff Lonn, Jim Miller, Larry Campbell, and Bill Black in the field June 17, 2016. They have concerns about the potential outcomes of the treatments in Units 2a, 2b, and 2c and questions about the analysis process. While I am sympathetic to their perspectives, we have successfully treated similar areas on the Forest and preserved the trail system while reducing fire severity. I assured them that we considered their objections carefully and will post the responses to them on the web.

I authorized tree marking and the soil test pit in anticipation of making some level of decision addressing the purpose and need but I did not have a specific decision in mind. After listening to the comments and objections and reviewing the analysis and project record, I believe Alternative 2 is the best way to manage the forest to retain the resource values in the project for the next 10-20 years.

### Project Area

The Westside Collaborative Vegetation Management Project (Westside Project) area is approximately 5,700 acres and administered by the Darby Ranger District, Bitterroot National Forest (Fig. DN-1). The project area includes about 930 acres of the IRA and 91 acres of private land. Approximately 161 acres would be treated in the IRA, 139 acres of which would be non-commercially thinned. No project activities occur on private lands within the project area boundary.

### *Healthy Forest Restoration Act*

This project is authorized under the Healthy Forest Restoration Act (HFRA) 16 U.S.C. 6591)) of 2003 as amended by the Agriculture Act of 2014 (2014 Farm Bill). HFRA encourages collaboration, emphasizes community protection, focuses the environmental analysis process, and provides a “pre-decisional” objection process.

Section 8204 of the 2014 Farm Bill added §602 (Designation of Treatment Areas) and §603 (Administrative Review) to address qualifying insect and disease infestations on National Forest System lands. Under §602 (b)(1), the Secretary of the U.S. Department of Agriculture, which oversees the Forest Service, was required to designate areas as part of an insect and disease treatment program that the Governor of the State requested. An area may be designated as part of an insect and disease treatment program if it meets at least one of the following criteria:

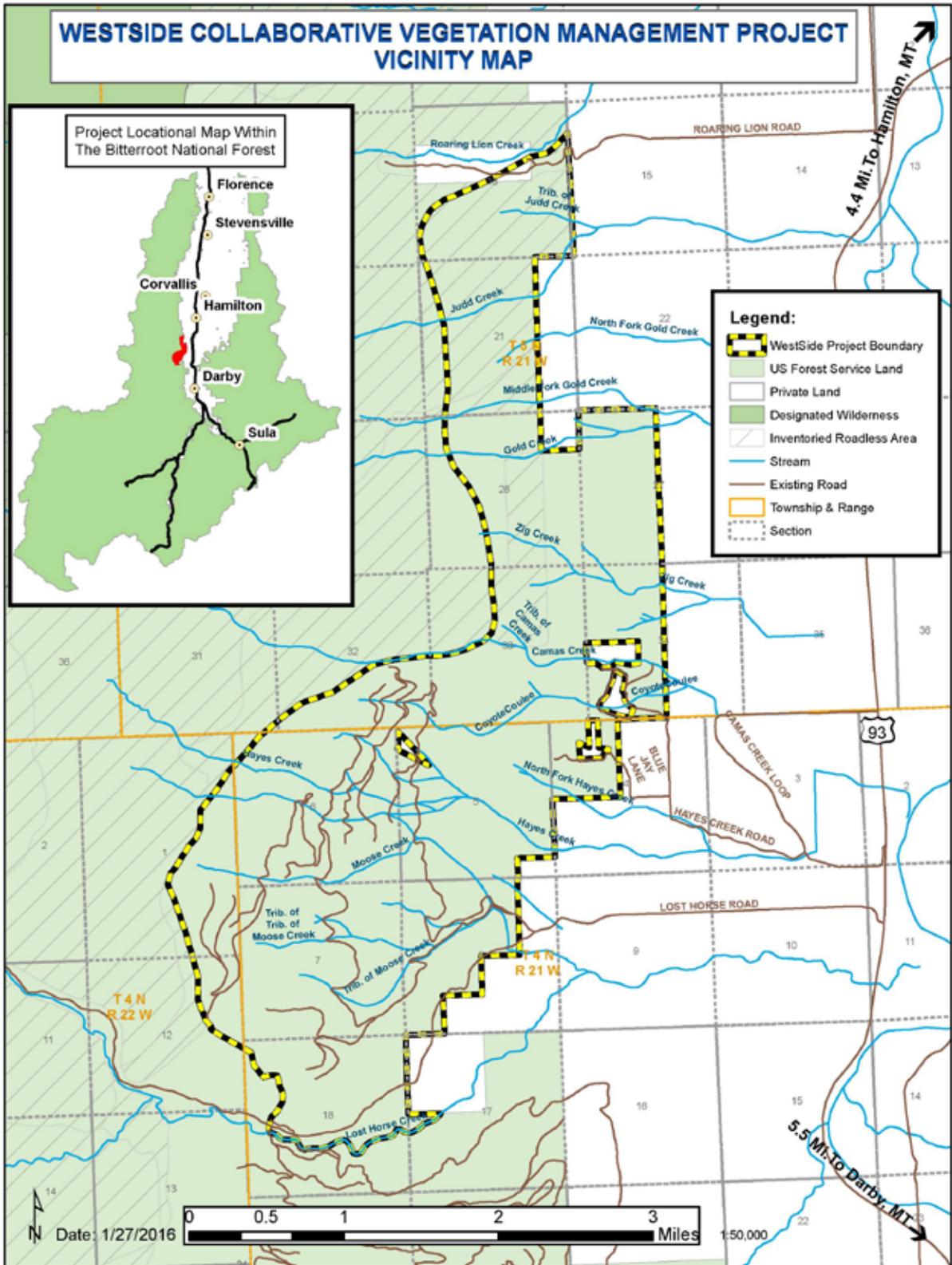


Figure DN- 1: Vicinity Map of the Westside Project Area. The Project area is directly adjacent to private land between Darby and Hamilton, Montana.

- Experiencing forest health decline based on annual forest health surveys
- At risk of experiencing substantially increased tree mortality over the next 15 years based on the most recent National Insect and Disease Map published by the Forest Service
- In an area in which hazard trees pose imminent risk to public infrastructure, health, or safety

On May 20, 2014, Secretary Vilsack announced the designation of approximately 45.6 million acres of National Forest System lands in 35 states to address insect and disease threats that weaken forests and increase the levels of dead or dying fuels. The Governor of Montana requested designation of about 5 million acres in Montana, and asked that project development in these designated landscapes be given priority. Approximately 3,731 acres of the proposed Westside project area were included in the Governor's priority landscape designation (PF-Agency-036).

The portion of the Selway-Bitterroot IRA in the project area was not designated as part of the initial insect and disease treatment program. The Chief of the Forest Service subsequently designated this area following my request for designation that was supported by the Montana State Forester. Mapping errors that did not show acquired lands as National Forest prevented these areas from being designated as part of the insect and disease treatment program (about 904 acres). However, these areas, and all areas within the Wildland-Urban Interface (WUI), can be treated under HFRA Title I because activities proposed in the Westside project would reduce hazardous fuels.

The Westside Project was analyzed in an EA under HFRA Titles I §104 and VI §602 (d). Title I authorizes hazardous fuel reduction projects located in the WUI. Title VI, §602 (d), authorizes projects in areas designated as part of a national insect and disease treatment program (USDA 2015, R1-15-11). All proposed treatment units in the Westside project area are in the WUI (EA Fig. 1-3). Some of the units are in areas designated as part of the national insect and disease treatment program because stands are increasingly susceptible to mountain pine beetle infestation and Douglas-fir dwarf mistletoe infection. Stand susceptibility to mountain pine beetle infestation is based on 2015 Forest Health Aerial survey maps and Forest Health Protection field evaluations (PF-SILV-001).

Activities proposed in the Westside project are entirely within 1.5 miles of the boundary of an at-risk community as identified in the Bitterroot Community Wildfire Protection Plan (CWPP) (EA Fig. 1-3). The activities implement the recommendations of the Bitterroot CWPP regarding general location and basic methods of treatment (HFRA of 2003 §104(d)(2)(3)). The National Forest boundary is the boundary of the at-risk community because of the density of homes with basic infrastructure and services within or adjacent to it (101(1)(ii)).

### ***Management Areas in the Project Area***

Management Areas in the Westside Project area are (EA Fig. 1-2):

- MA 2: Manage big game winter range (476 ac.)
- MA 3a: Manage timber and maintain a partial retention visual quality objective (3,870 ac.)
- MA 3b: Manage riparian habitat
- MA 3c: Manage timber and maintain a retention visual quality objective (608 ac.)
- MA 5: Manage semi-primitive recreation areas and Inventoried Roadless Areas (543 ac.)

Commercial timber harvest is allowed in each of these management areas but only under specific circumstances in MA 3b and 5. In MA 3b, the removal of commercial-sized trees must benefit the riparian values. In MA 5, "the cutting, sale, or removal of generally small diameter timber is needed ...to maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to

occur under natural disturbance regimes of the current climatic period...and will maintain or improve one or more of the roadless area characteristics.." (36 CFR 294.11, 294.13(b)(1)(ii)). A proposal to remove timber from a roadless area must be approved by the Regional Forester.

On June 5, 2015, I briefed the Regional Forester on the proposal to commercially harvest timber in Unit 1 of the Westside project area and non-commercially thin Units 11-16, 19, and 20. The purpose of the harvest and thinning is to reduce fire behavior and provide fire management options should a fire in the IRA burn toward the community on the Bitterroot National Forest boundary. It is not possible to design treatments that would prevent or stop a fire from burning onto adjacent private lands but managing forest density can reduce potential fire behavior (EA pgs.3-34 – 3-36). Private land owners adjacent to National Forest, especially those adjacent to the IRA, need to continue fuel reduction treatments to reduce fire risk on their property (Cohen, Jack D. 2000) and complement fuel reduction treatments on adjoining parcels.

## Purpose and Need

The Forest Service was developing a proposal to improve forest resilience to insects, disease, and fire in the area between Lost Horse Canyon and the IRA. Treatments in this area would continue treatments in the WUI along the Bitterroot front, as recommended in the Bitterroot Community Wildfire Protection Plan (CWPP) (RC&D 2006). The Bitterroot Restoration Committee (BRC) encouraged the Bitterroot National Forest to look at thinning the forest between Roaring Lion and Camas creeks to reduce the potential threat of wildfire on adjacent private lands. The northern half of the area between Roaring Lion and Camas creeks is largely IRA. The Forest Service agreed to expand the area to include the IRA.

The ID Team considered the priority to reduce fuels in the Bitterroot CWPP, the Montana Governor's priority for treating insect and disease potential, the BRC concerns, as well as the differences between existing and desired forest conditions in the Westside project area (Ch. 3 pgs. 21–26, 51, 146-149, and affected environment sections in wildlife analysis) and determined there is need to:

- Improve forest resilience to natural disturbances such as fire, insects, and disease
- Reduce stand density to provide more separation between tree crowns and reduce the potential that fire would spread through the canopy in low- and mid-elevation mixed ponderosa pine and Douglas-fir forests
- Restore, maintain, and enhance wildlife and native plant habitat and diversity in riparian areas, aspen clones, and meadows
- Manage timber to provide forest products, jobs, and income that contribute to the sustainable supply of timber products from the Bitterroot National Forest
- Provide sustainable infrastructure (road access and bridge) for long-term management of the National Forest

## Decision and Reasons for the Decision

After reviewing the analysis record, listening to questions, concerns, and objections from the public, and listening to and discussing the analysis with the ID Team, I have decided to implement Alternative 2 as described in the Westside EA, Chapter 2. Approximately 2,327 acres would be treated with commercial and non-commercial timber harvest, followed by prescribed fire (Fig. DN-2). Commercial harvest would occur on 1,349 acres (Table DN-1):

- 506 acres would be treated with improvement cuts (22 acres in the Selway-Bitterroot IRA)
- 799 acres would be treated with irregular harvest cuts

- commercial volume would be removed from 44 of the 92 acres of aspen treatment

Non-commercial trees would be removed from about 978 acres:

- understory ponderosa pine and Douglas-fir would be removed from 666 acres of forest (139 acres in the IRA)
- 206 acres of ponderosa pine plantation
- 48 acres of aspen
- 58 acres of meadow restoration (Table DN-2)

Detailed descriptions of the treatments are provided in the Westside EA.

**Table DN- 1: Unit Treatments in Alternative 2 in the Westside Collaborative Vegetation Management Project**

UNIT No.	ALTERNATIVE 2	AREA (ACRES)	YARDING METHOD		LANDINGS	
			GROUND	CABLE	#	ACRES
1	Improvement Harvest	42	42		1	0.25
2a	Irregular harvest	215	215		5	1.25
2b	Irregular harvest	136	136		4	1.00
2c	Irregular harvest	188	188		6	1.50
3a	Improvement Harvest	13		13	8	0.80
3b	Improvement Harvest	6		6	5	0.50
3c	Improvement Harvest	18		18	12	1.20
3d	Improvement Harvest	9	9		1	0.25
3e	Improvement Harvest	6	6		1	0.25
3f	Improvement Harvest	4	4		1	0.25
4a	Irregular Harvest	48	48		3	0.75
4b	Improvement Harvest	30		30	17	1.70
5	Improvement Harvest	85	85		2	0.50
6	Irregular Harvest	21	21		1	0.25
7a	Irregular Harvest	71	71		4	1.00
7c	Improvement Harvest	92		92	25	2.50
7d	Improvement Harvest	112	112		3	0.75
7e	Improvement Harvest	17	17		1	0.25
7f	Improvement Harvest	35	35		1	0.25
8	Irregular Harvest	10	10		1	0.25
9a	Irregular Harvest	18	18		1	0.25
9b	Irregular Harvest	59		59	21	2.10
9c	Irregular Harvest	27	27		1	0.25
9d	Irregular Harvest	6	6		1	0.25
10	Improvement Harvest	37	37		1	0.25
11	Non-commercial Thin with Prescribed Burn	29	NA	NA	NA	NA

UNIT No.	ALTERNATIVE 2	AREA (ACRES)	YARDING METHOD		LANDINGS	
			GROUND	CABLE	#	ACRES
12	Non-commercial Thin with Prescribed Burn	26	NA	NA	NA	NA
13	Non-commercial Thin with Prescribed Burn	10	NA	NA	NA	NA
14	Non-commercial Thin with Prescribed Burn	12	NA	NA	NA	NA
15	Non-commercial Thin with Prescribed Burn	13	NA	NA	NA	NA
16	Non-commercial Thin with Prescribed Burn	21	NA	NA	NA	NA
17	Non-commercial Thin with Prescribed Burn	59	NA	NA	NA	NA
18	Non-commercial Thin with Prescribed Burn	23	NA	NA	NA	NA
19	Non-commercial Thin with Prescribed Burn	19	NA	NA	NA	NA
20	Non-commercial Thin with Prescribed Burn	9	NA	NA	NA	NA
21	Plantation Thin	173	NA	NA	NA	NA
22	Plantation Thin	33	NA	NA	NA	NA
23	Meadow Restoration	33	NA	NA	NA	NA
24	Meadow Restoration	18	NA	NA	NA	NA
25	Non-commercial Thin with Prescribed Burn	97	NA	NA	NA	NA
26	Non-commercial Thin with Prescribed Burn	27	NA	NA	NA	NA
28	Non-commercial Thin with Prescribed Burn	17	NA	NA	NA	NA
29	Non-commercial Thin with Prescribed Burn	106	NA	NA	NA	NA
33	Meadow Restoration	7	NA	NA	NA	NA
34	Non-commercial Thin with Prescribed Burn	171	NA	NA	NA	NA
35	Non-commercial Thin with Prescribed Burn	27	NA	NA	NA	NA
36	Aspen Enhancement	39	13	NA	NA	NA
37	Aspen Enhancement	4	3	NA	NA	NA
38	Aspen Enhancement non-commercial only	8	NA	NA	NA	NA
39	Aspen Enhancement	23	14	NA	NA	NA
40	Aspen Enhancement	14	12	NA	NA	NA
41	Aspen Enhancement	4	2	NA	NA	NA
	<b>TOTAL AREA OF TREATMENT</b>	<b>2,327</b>	<b>1,131</b>	<b>218</b>	<b>127</b>	<b>18.6</b>

### Improvement Cuts

The objectives of improvement cuts are to improve tree species composition and forest health, and promote fire resilience. Improvement cuts are applied to units with mixed tree species or dense ponderosa pine. The treatment will remove trees in all diameter size classes to levels appropriate to the site with a focus of removing diseased trees and over-represented tree species. After treatment, the forest will appear to be a healthy, open-growing mix of ponderosa pine and Douglas-fir in a range of diameter classes. This treatment promotes fire resilience by reducing the potential for active crown fire. Reducing canopy density and the continuity of fuels in the canopy, and raising the bottom of the canopy prevents fires from burning into the canopy. This treatment also interferes with fire

spread if it reaches the canopy because fire is less likely to ignite crowns of neighboring trees. In the long-term, the forest would have a range of diameter and age classes and adequate space that allows trees to grow into the next size class.

### **Irregular Selection**

Irregular selection harvest is the combination of small openings (with and without reserves) and shelterwood with reserves integrated with variable density thinning. These combined types of harvest are used to initiate the development of uneven-aged forest, creating mosaics of tree species composition and structure. This treatment is applied to mixed ponderosa pine and Douglas fir forests where Douglas fir is heavily infected with dwarf mistletoe or growing in areas with high levels of root disease. We create openings by removing Douglas-fir with high levels of dwarf mistletoe infection or growing in areas with root disease. Large ponderosa pine will be left in and adjacent to these openings to regenerate ponderosa pine and create a new seedling structural stage that is more resistant to dwarf mistletoe and root disease. Shelterwood harvests will be applied to areas with lesser amounts of disease or harsh site conditions where seedlings need protection from the remaining overstory. Variable density thinning will occur between the openings and shelterwood harvest areas to increase the growing space between trees and retain the distribution of age and size classes. With variable density thinning, trees are removed from both the understory and overstory. Stand density will vary throughout the unit but will generally be fairly open with inclusions of denser forest and sporadic openings. A range of tree sizes will be present but large ponderosa pine and Douglas fir will predominate. Douglas-fir will show no signs of dwarf mistletoe infection or only light symptoms of infection. In the long-term, the forest will be predominantly open ponderosa pine with a range of structure classes from seedlings to over-mature. Snags will continue to develop as the forest matures and will create coarse woody debris when they die and decompose. To achieve the development and maintenance of three age classes will require several entries at 15 to 20 year intervals.

### **Non-commercial thinning**

Non-commercial thinning is prescribed in younger stands with smaller average stand diameters. The purpose is to increase growing space between trees, reduce fuel loads and ladder fuels, and select specific stand features such as tree species or disease resistance. Land managers have better control over the resulting stand using non-commercial thinning than we do using prescribed fire because we can select for specific stand features (van Wagendonk 1996, Weatherspoon and Skinner 1996, Stephens 1998, Agee et al. 2000, Miller and Urban 2000). Thinning is followed by prescribed fire to reduce surface fuels created by the thinning (Alexander and Yancik 1977).

In the Westside project, we use non-commercial thinning to improve growing space and reduce fuel loads, as well as, reduce tree colonization in meadows. Typically, non-commercial thinning removes trees up to seven inches DBH and this will be the case for most units in the Westside project area. In some units with larger average stand diameters and no economical way to remove the larger diameter trees from the site, we will thin up to a 10 inch DBH. These units, largely in the IRA, will have an open overstory of trees 10 inches DBH or greater.

Surface fuels in excess of levels typical of the sites will be piled and burned. Typically, fuels less than four inches diameter will be piled and larger diameter pieces will be cut into shorter pieces and left as coarse woody debris. Depending on stand conditions, an underburn may be prescribed to further reduce surface fuels. Underburning will be allowed to cross unit boundaries and back into riparian areas that are outside of the units. Allowing the fire to back into the riparian areas will avoid the

# WESTSIDE COLLABORATIVE VEGETATION MANAGEMENT PROJECT ALTERNATIVE 2

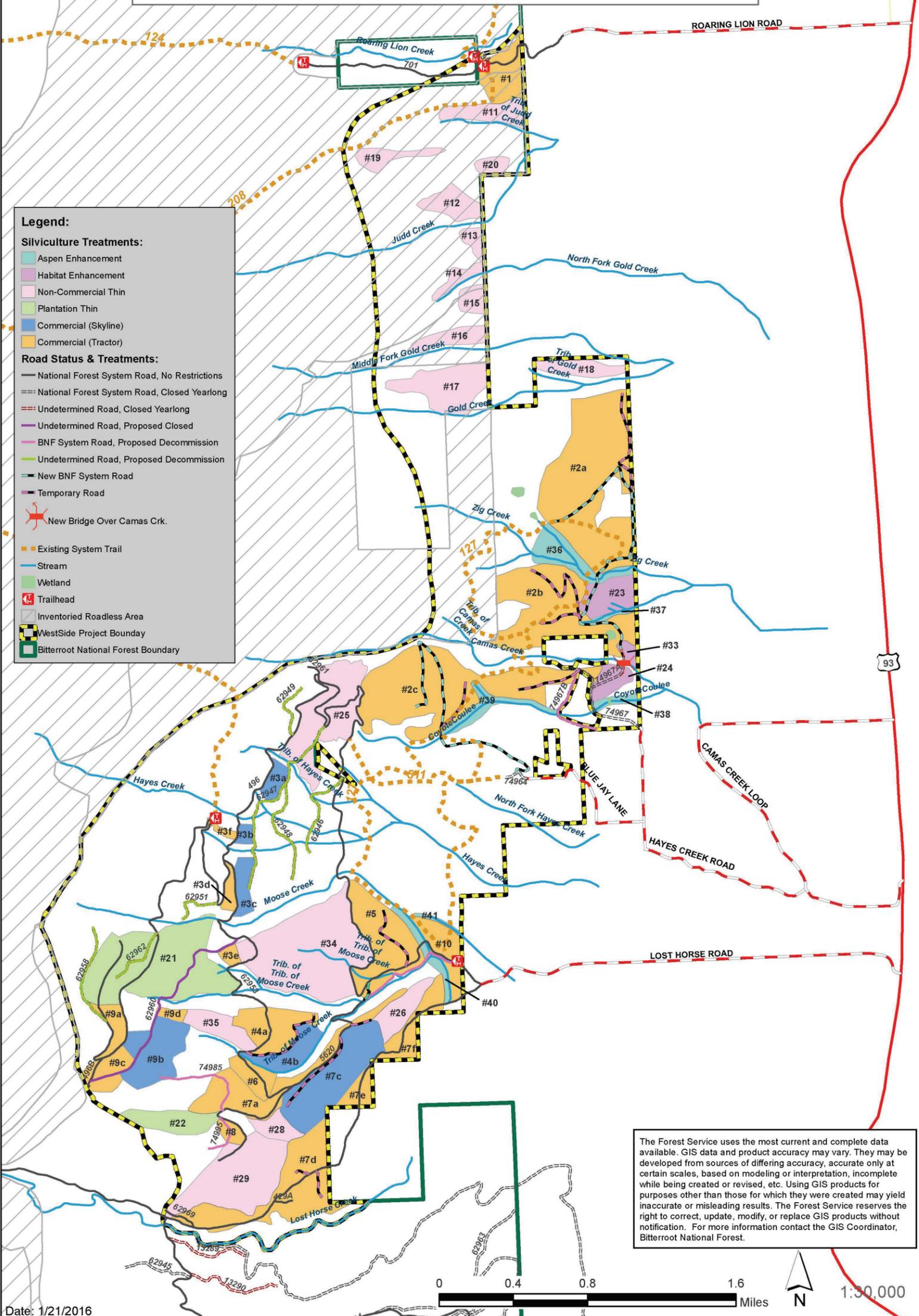


Figure DN-2: Proposed Treatments in Alternative 2 of the Westside Collaborative Vegetation Management Project.

**Table DN- 2: Summary of Activities in Alternative 2 of the Westside Collaborative Vegetation Management Project.**

<b>Treatment</b>	<b>Alternative 2</b>	<b>Treatment</b>	<b>Alternative 2</b>
Total Area Treated (acre)	2,327	Specified Road Construction (mile)	3.8
Irregular Harvest (acre)	799	Temporary Road Construction (mile)	3.8
Improvement Harvest (acre)	506	Store Roads (mile)	1.3
Non-commercial Thin (acre)	666	Decommission Roads (mile)	5.9
Plantation Thin (acre)	206	Landings	127 (19 acres)
Meadow Restoration (acre)	58	Sawtimber Volume (MBF) (CCF)	6,500 (13,022)
Aspen Enhancement (acre)	92	Total Volume (MBF) (CCF)	7,200 (14,324)
Prescribe fire (acre)	2,098	Present Net Value – Timber sale only	-120,896 -828,604
		All expenditures (\$)	
Ground-based (acre)	1,131	Total timber sale expenditures (\$)	479,991
		Total expenditures	1,321,344
Skyline (acre)	218		

need to construct firelines in proximity or parallel to creeks and riparian areas. There will be no burning in Units 21 and 22 because they are plantations.

Prescribed fire on 2,098 acres would follow most of the treatments. The type of prescribed fire would be determined by post-treatment exams that measure fuel loads, canopy base height, stand structure, and tree diameters. Prescribed fire type would likely be pile burning, jackpot, underburning, or a combination of the three methods.

We anticipate needing about 127 landings, totaling 19 acres, to limb and load logs onto log trucks (Tables DN-1 and DN-2). Frequent, small (0.1 acre) roadside landings would be used for the skyline units. Ground-based yarding operations require fewer but larger landings, about a quarter acre each. Landings would be located on system and temporary roads.

My decision includes:

- construction and addition of 3.8 miles of new road to the National Forest System Roads
- addition of 1.3 miles of undetermined road to the National Forest System Roads
- construction of a bridge over Camas Creek
- construction and rehabilitation of 3.8 miles of temporary road
- decommission of 3.8 miles of undetermined roads
- decommission of 2 miles of National Forest System Road

The new system roads are needed to access Units 2a, 2b, and 2c and will be needed in the long-term to inventory and continue forest treatments. These roads will be laid out and designed as described in the EA (Chapter 2 pg. 4). The new roads would be closed at the completion of the timber sale. The

roads into Units 2a and 2b would be gated at the new bridge across Camas Creek and available for administrative use (Maintenance Level (ML) 2). The road into Unit 2c would be stored (ML 1) by removing the drainage structures, improving the road surface drainage, and seeding the road surface to protect it until the next entry. Where the road overlaps or crosses the Coyote Coulee trail system, the trail will be maintained, restored, or replaced in-kind to the original design according to the USDA Forest Service Standard Trail Plans and Specifications.

The undetermined road added to the National Forest System Roads will also be ML 1 and stored until the next entry. Roads will be decommissioned as specified in Table DN-3. The temporary roads and landings will be rehabilitated after use. Rehabilitation includes removal of all structures, recontouring, slashing, and seeding with native plant seed to restore soil productivity (Table DN-4).

**Table DN- 3: Status of Roads Proposed for Decommissioning in Alternative 2 in the Westside Collaborative Vegetation Management Project Area.**

<b>NFSR#</b>	<b>AREA</b>	<b>MILES</b>	<b>TREATMENT</b>
62946	Hayes Creek	0.6	Obliteration treatments completed during Hayes Creek project. No treatment required.
62947	Hayes Creek	1.1	Stream crossing structures have been removed. Natural recovery present on approximately half of the road. Entrance has been blocked. Further treatment would require temporary stream crossings and disturbance of natural recovery that has occurred. No further treatments recommended.
62948	Hayes Creek	0.6	Stream crossing structures have been removed and natural recovery has occurred on much of the road. Further treatment would require temporary stream crossings and disturbance to natural recovery that has occurred. No further treatments recommended.
62949	Hayes Creek	0.3	Entrance has been recontoured and road is naturally recovering. No treatments recommended.
62951	Moose Creek	0.3	Road has been recontoured. No treatments required.
62958	Moose Creek	0.6	Recontour road entrance to eliminate unauthorized motorized use. Closure of road entrance will be designed to accommodate winter-use (snowmobiles). Road is naturally recovering.
62962	Moose Creek	0.4	Recontour road entrance to eliminate unauthorized motorized use. Road is naturally recovering.
74985	Lost Horse (Old Mine)	0.6	Portions of this road in unit 7a will be used for ground-based yarding. Upon completion of yarding, the road/unauthorized trail segments will be fully recontoured, seeded, slashed, and fertilized
74995	Moose Creek	0.3	Road entrance recontoured and road is naturally recovering. No treatments required.
5620	Old Mine	0.6	Full recontour of abandoned road segments.
74967B	Coyote Coulee	0.5	Gate at entrance, road is naturally recovering. No treatments required.
	<b>Total Miles</b>	<b>5.9</b>	

The design features shown in Table DN-4 will be included in the implementation of the Westside project and monitoring will occur as described in the EA (page 2-10).

### *Why I Chose Alternative 2*

My decision was based on how well the alternatives in the EA address the purpose and need of the project and the issues that were raised during the scoping and comment process. I weighed the potential benefits of the project against the possible negative effects and considered the suggestions and concerns from the public. I considered the alternatives proposed through public comment and approved the rationale for not carrying them through the analysis (Table DN-7). I considered the time required for planning and implementing a project and the current resource conditions. I considered Forest Plan standards and guidance for the project area, and took into account competing interests and values of the public. The Finding of No Significant Impact (FONSI) supports the use of an EA as the appropriate level of NEPA analysis.

Alternative 2 is responsive to the project's purpose and need and the resource issues described in Table DN-5. Though resource conditions are not at a crisis point, for example, a large portion of the area is susceptible to active crown fire or experiencing a mountain pine beetle outbreak, stand conditions for a large portion of the treatment units have a high potential to increase mountain pine beetle populations and would support passive crown fire under typical summer conditions. Passive crown fire can become active crown fire when weather and burning conditions exceed typical summer conditions. We will lose opportunities to be pre-emptive and restore the natural fire regime, maintain large diameter trees in the low elevation forest, aesthetic trail conditions, and heritage resources, and promote old growth forest development and wildlife cover if we wait until the project area is at high risk of active crown fire or a mountain pine beetle outbreak is in progress. Forest management will be reactive to the actual or pending crisis and would have limited effectiveness for promoting forest health, plant and wildlife diversity, and sustainable forest products. I am confident from my review of the affected environment and environmental consequences (EA Chapter 3) that the resource specialists have adequately described the limits of the environmental effects and Alternative 2 is within those limits.

Underburning requires appropriate burning conditions and it is difficult to predict when those conditions would be achieved. Therefore, effects on recreation use and visual quality could last 3-5 years. Larry-Bass timber sale was implemented in the fall of 2012 through 2013 with minimal effects on the resources, recreation, and trails in the project area (Forest Plan Monitoring and Evaluation report, Fiscal Years 2010-2013, Item 22\_Riparian\_2014\_FINAL\_07302015). Aside from temporary closures during the timber sale, there was no observable decrease in recreation use following the timber sale (Westside EA pgs. 3-60, 3-61).

Alternative 2 will improve forest resilience to bark beetles, diseases, and fire in the project area, and limit adverse effects on visual quality, recreation use, and elk habitat (Table DN-6). I believe improving the resilience of the forest to bark beetle infestation and maintaining the aesthetics of the project area are very important. The potential adverse effects would be reduced or eliminated by implementing the design features incorporated into this decision (Table DN-4).

**Table DN- 4: Design Features in Alternative 2 Westside Collaborative Vegetation Management Project**

OBJECTIVE	DESIGN FEATURE										
<b>SOILS</b>											
Minimize soil erosion and compaction	Activities will comply with Best Management Practices (BMPs) to minimize effects to soil resources. BMPs are listed in Appendix A. Complete descriptions are available in the Project File.										
	Summer ground-based yarding will occur when soils are dry (test soil moisture by forming soil into a ball in your hand and lightly toss several times; if soil maintains ball shape moisture is too high for ground-based yarding, if soil crumbles moisture levels are low enough to allow ground-based yarding). Consult the Forest Soil Scientist when questionable moisture conditions are present.										
	<p>Winter operations could be utilized in the ground-based units if the following conditions are met: snow depth, distribution, and air temperatures must be such that ground-based operations maintain the following combination of snow depth and frozen soil conditions</p> <table border="1" data-bbox="597 829 1328 1102" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Depth of compacted (by equipment) snow under wheels or track tread</th> <th style="text-align: center;">Minimum thickness of solidly frozen soil needed below compacted snow layer</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">10 or more inches</td> <td style="text-align: center;">0 inches</td> </tr> <tr> <td style="text-align: center;">7 to 10 inches</td> <td style="text-align: center;">1 inch</td> </tr> <tr> <td style="text-align: center;">4 to 7 inches</td> <td style="text-align: center;">2 inches</td> </tr> <tr> <td style="text-align: center;">less than 4 inches</td> <td style="text-align: center;">4 inches</td> </tr> </tbody> </table> <p>*Pre-trailing. Pre-trailing selected skid trails a day or so prior to skidding or other heavy trail use is a way to achieve this objective. If average, pre-compacted snow depth along the proposed trail is more than 15 inches, pre-trailing can be done whether or not the soil is frozen. If pre-compacted snow depth is 8 to 15 inches; pre-trailing should be done only if the soil is solidly frozen in the top one inch or more. Otherwise, pre-trailing should be delayed until more snow falls to accumulate to the 15 inch or more depth. To further aid soil protection, pre-trailing should be done using an “easy-does-it” approach, including slow ground speeds and steady movements. Avoid spinning tires and bouncing equipment around on trails as much as possible. Adequate pre-trailing air temperatures generally are in the low 20’s Fahrenheit or lower. For more information about pre-trailing conditions, consult with the Forest soil scientist.</p>	Depth of compacted (by equipment) snow under wheels or track tread	Minimum thickness of solidly frozen soil needed below compacted snow layer	10 or more inches	0 inches	7 to 10 inches	1 inch	4 to 7 inches	2 inches	less than 4 inches	4 inches
	Depth of compacted (by equipment) snow under wheels or track tread	Minimum thickness of solidly frozen soil needed below compacted snow layer									
10 or more inches	0 inches										
7 to 10 inches	1 inch										
4 to 7 inches	2 inches										
less than 4 inches	4 inches										
Skid trails will be designated and historic trails and road prisms will be used as skid trails to the extent feasible											
Reduce detrimental soil disturbance (DSD)	Rehabilitation activities of temporary roads, skid trails, and landings would include recontouring cut and fill areas, slashing with readily available debris, and application of organic fertilizer and native plant seed. Use local seeding guidelines for detailed procedures and appropriate mixes. Refer to the Bitterroot National Forest Seed Mix to determine which species to use (FSM 2070.3)										
	Pile burning should occur during moist conditions to minimize duff consumption and high severity burn impacts on soils.										

OBJECTIVE	DESIGN FEATURE
	<p>Hand pile sizes, not associated with landings, will average 6-8 feet in diameter so localized areas of soil disturbance will be less than about 50 square feet.</p> <p>Where feasible, pile and burn slash where detrimental soil disturbance (DSD) already exists, such as on old log landings, skid trails, and roads associated with the past harvest units. By piling and burning thinning slash in areas where soil disturbance currently exists, no new areas of DSD would result from the proposed activities.</p>
Unit-Specific Design Criteria	<p>Unit 3e – Existing detrimental soil disturbance in the unit requires that ground-based yarding be completed in the winter or the unit be yarded with a skyline or full suspension system.</p> <p>All Proposed Ground-Based Yarding Units have inclusions of slopes that exceed 40% gradient. Forest Plan standards do not allow ground-based yarding equipment on slopes exceeding 40%. Directional felling, ground lead, or alternative methods of yarding will be required to remove trees from steep slope inclusions.</p> <p>Hauling Operations – Dust abatement for log hauling will be completed on sections of roads in the project area that are in the immediate vicinity of residences.</p>
Maintain soil productivity	<p>Coarse woody debris (CWD) larger than 15 inches in diameter will not be intentionally ignited during hand lighting. It is understood that once hand crews light the fire, fire may burn into and combust some large CWD.</p> <p>Allow time for nutrients to leach from slash prior to burning. The slash will be left through one winter after cutting to allow for initial decomposition and nutrient leaching.</p> <p>Upon completion of prescribed fire or maintenance burning, at least 70 percent ground cover is necessary to prevent detrimental accelerated erosion and loss of soil productivity. In those cases where ground cover is less than 70 percent prior to burning, consumption and loss of ground cover should not exceed 15 percent. Ground cover includes duff, organic soil horizons, tree basal area, fine woody debris, coarse woody debris, and surface coarse fragments. In those cases where ground cover is less than 70 percent prior to burning, fuel consumption and ground cover loss should not exceed 15 percent. Fire prescriptions will be designed to meet these soil protection requirements.</p> <p>The silvicultural prescriptions will be designed to account for future large CWD (&gt;15 inches diameter) recruitment that will meet acceptable levels in stands where CWD is less than minimum levels before treatment. CWD will be left in these stands to the extent feasible to meet minimum requirements that do not pose a fuels hazard. High amounts of small CWD (3-6 inches diameter) may present wildfire risks.</p> <p>Upon completion of commercial harvest and prescribed fire activities, the following levels of coarse woody material (greater than 3 inches diameter) shall be left. This material will include the combination of standing dead as well as down woody fuels.</p>

OBJECTIVE	DESIGN FEATURE	
	<b>Fire Group</b>	<b>Coarse Woody Debris (CWD) (Tons/acre)</b>
	Warm, Dry Ponderosa Pine and Douglas-fir (FG-2 & 4)	5-10
	Cool, Dry or Moist Douglas-fir (FG-5, 6)	10-20
	Cool Sites Usually Dominated by Lodgepole Pine (FG-7) Dry, Lower Subalpine (FG-7) Moist, Lower Subalpine (FG-9)	8-24
	CWD will generally be evenly distributed on each acre, unless otherwise agreed to by the Contracting Officer or their designee	
WATERSHED AND FISHERIES		
Ensure riparian- dependent resources receive primary emphasis in Riparian Habitat Conservation Areas (RHCAs.) And, ensure Montana Streamside Management Zone Laws are met.	<p>The standard INFISH (USDA Forest Service 1995) RHCAs will be applied. A map of these areas is located in PF-Fish-001. They are:</p> <ul style="list-style-type: none"> <li>300 feet on each side of fish-bearing streams</li> <li>150 feet on each side of permanently flowing, non-fish bearing streams</li> <li>100 feet on each side of seasonally flowing or intermittent streams</li> <li>150 feet on each side of ponds, lakes or wetlands &gt; 1 acre in area</li> <li>100 feet on each side of ponds, lakes or wetlands &lt; 1 acre in area</li> <li>100 feet of landslide prone areas.</li> </ul> <p>RHCA boundaries will be designated and marked on the ground in consultation with the Fish Biologist or hydrologist.</p> <p>In RHCAs, trees can be felled when they pose a safety risk. Felled hazard trees will be left on-site (INFISH standard RA-2), unless their removal is deemed necessary for safety reasons by the Timber Sale Administrator (TSA).</p> <p>Generally, trees will not be harvested from RHCAs. Exceptions are trees that would likely improve the deciduous species left onsite, and can be directionally felled away from the channel. Trees leaning toward the stream that would reach a stream or intermittent channel may be felled, but would be retained onsite.</p> <p>The purpose of these proposed treatments in RHCAs are based on the treatments' contribution to promote the long-term ecological integrity of the deciduous species and associated wildlife, while having no effect on native fish (INFISH Standard and Guideline for Watershed Restoration and Habitat WR-1).</p> <p>Ground-based equipment will be prohibited from entering SMZs without the appropriate variance from Montana DNRC.</p> <p>Log landings, temporary roads, and skid trails will not be located in the RHCAs. Exceptions include areas where existing log landings occur.</p> <p>Generally, there will be no fuel storage, mixing of fuels, or refueling equipment in RHCAs. If there are no alternatives, refueling in RHCAs may occur, but must be pre-approved by the Fish Biologist or Hydrologist, and have an approved spill containment plan. Small pumps (for example, Mark III) and chainsaws can be refueled within the RHCA as long as proper spill containment actions are implemented (USDA Forest Service 1995).</p> <p>The TSA or resource specialists will monitor road conditions to ensure they do not contribute sediment to streams. Road maintenance activities (including snowplowing and dust abatement) will follow the requirements</p>	

OBJECTIVE	DESIGN FEATURE
	specified in the Programmatic Biological Assessment for Road-Related Activities (2014) and BNF BMPs (Appendix A).
Provide stable roads and conduct road maintenance to minimize sediment	<p>Drainage from haul roads will be maintained, during all hauling periods. This includes, but is not limited to providing water access to ditches, inlets of ditch relief pipes, and outlets that are kept free of blockage. Holes in snow berms will be adequate to allow road drainage and completed prior to winter haul, and kept open throughout the duration of winter hauling.</p> <p>Conduct road maintenance activities specified in the Hydrologist's report prior to log hauling to insure proper road and ditch drainage</p> <p>Project-related traffic will be regulated during wet periods to minimize erosion and sediment delivery to streams (INFISH RF-2)</p> <p>Side-casting of road material (during road maintenance and snowplowing) into streams, wetland, and RHCAs is prohibited (SMZ Rule #8; INFISH RF-2(f)).</p> <p>Seed, fertilize, and slash decompacted or recontoured roads with a native seed mix and organic fertilizer. Weed-free mulch is required on sites located within sediment contributing distance of streams (about 300 feet).</p>
Provide for diverse and productive native and desirable non-native plant communities in riparian zones	<p>Protect and retain sub-merchantable trees and shrubs within 50 feet of streams and wetlands (SMZ Rule #5). If required, an application for Alternative Practice (SMZ Rule #10) would be submitted for manual thinning within the SMZ to include areas that are proposed to benefit aspen and associated species.</p> <p>Slash piles will not be created within 50 feet of streams and wetlands.</p> <p>Prescribed burning is proposed within 100 feet of streams. During development of the burn plan, the sites would be reviewed by the Fisheries Biologist or Hydrologist to ensure they met the riparian management objectives.</p> <p>Hand ignition would be allowed within the RHCA, but not within 50 feet of streams or within wetlands (SMZ Rule #3). Fire may be allowed to back into wetlands. Helicopter ignition would not occur within RHCAs. The need for an SMZ Law Alternative Practice would also be assessed when unit-specific burn plans are developed.</p> <p>Generally, hand fireline will not be dug in the RHCAs. If needed, hand fireline can be dug in the RHCAs and must 1) avoid wetlands, 2) contain proper drainage structures, and 3) be recontoured and covered with slash upon completion of the burn. Machine fireline is prohibited in RHCAs. Fire will be allowed to burn outside of unit boundaries and back into RHCAs outside of the units. Allowing prescribed fire to back into RHCAs and wetlands avoids the need to build firelines near or parallel to these areas.</p>
Avoid direct effects to native fish and risks associated with aquatic invasive species.	<p>If drafting from streams occurs, intake hoses will be fitted with a screen mesh equal to or smaller than 3/32 inch.</p> <p>Prior to entering the project area all equipment that has the potential to come into contact with water must be inspected, clean and dry. Do not transfer any water, sediment, or vegetation when moving between drafting sites</p>
Ensure that water-related beneficial uses are protected and that State water quality standards are met	<p>Protect active irrigation ditches during harvest.</p> <p>The contract administrator will ensure application of Best Management Practices during timber sale implementation. Applicable BMPs are in the Project File and summarized in Appendix A.</p>

OBJECTIVE	DESIGN FEATURE								
	<p>The design and construction of the Camas Creek bridge on FR 74967 would accommodate a 100 year flood, including associated bedload and debris, and provide passage for aquatic species (INFISH RF-4 &amp; RF-5).</p> <p>Construction and management of new or temporary roads will use all applicable BMPs, including dewatering of work sites, proper culvert sizing, and use of mulch or other sediment control practices as needed</p>								
<b>WILDLIFE</b>									
Protect aspen clones during burning	After slashing non-merchantable conifers within aspen clones, drag slash 50 feet away from the clones to prevent high fire severity within the clones. Whole tree yard designated merchantable conifers from aspen clones by winching from outside the RHACA in accessible portions of Units 36, 37, 39 40, and 41.								
Maintain snag density	<p>Stand level prescriptions by a certified silviculturist and wildlife biologist will provide unit-specific snag retention requirements including spatial distribution, species, and snag sizes.</p> <p>Prescriptions will meet the proposed snag standards including the following number of snags over 9" DBH retained by Fire Groups if they exist in the unit prior to treatment.</p> <table border="1" data-bbox="578 890 1318 1066"> <thead> <tr> <th>Fire Group</th> <th>Snags (average number of trees per acre)</th> </tr> </thead> <tbody> <tr> <td>2,4</td> <td>2-5</td> </tr> <tr> <td>6</td> <td>4-12</td> </tr> <tr> <td>7, 8, 9</td> <td>10-15</td> </tr> </tbody> </table> <p>Irregular distribution and small clumps are desirable. Location away from open roads is preferable. Species preference in order is ponderosa pine, Douglas-fir, lodgepole pine, and true firs. Snags retained will include some from the largest diameter size class available within that unit. Larger snags are preferred over smaller snags for retention.</p>	Fire Group	Snags (average number of trees per acre)	2,4	2-5	6	4-12	7, 8, 9	10-15
Fire Group	Snags (average number of trees per acre)								
2,4	2-5								
6	4-12								
7, 8, 9	10-15								
Protect signed wildlife trees	Protect trees identified with "Wildlife Tree" signs from cutting or other damage. Exceptions include compliance with the silvicultural prescription and trees that pose a safety hazard. Wildlife trees that must be felled for safety reasons will not be yarded.								
Provide coarse woody debris for wildlife	<p>Do not remove pre-existing down logs from cutting units.</p> <p>In areas with little CWD, meet CWD retention guidelines by leaving 5 to 10 boles &gt; 8' long in the 10 to 20" diameter range per acre, or 10 to 15 boles &gt; 8' long in the 3" to 10" diameter range per acre. Species preference for longer pieces of CWD is Douglas-fir or true firs, to avoid problems with Ips beetles.</p> <p>Leave 1 to 2 hand piles per acre unburned in areas where hand piling is used for slash disposal to enhance habitat for small mammals and birds.</p>								
Limit disturbance around active peregrine falcon and goshawk nests	Restrict project activities within ½ mile of any active peregrine falcon nest site between March 15 and August 31 and within ½ mile of any active goshawk nest between April 15 and August 31 to limit disturbance to nesting falcons. The Wildlife Biologist will determine occupancy.								

OBJECTIVE	DESIGN FEATURE
<b>SENSITIVE PLANTS</b>	
Protect sensitive plant populations during harvest operations	Sensitive plant populations would be identified and buffered from project activities. Buffer widths are based on habitat requirements of the specific plant populations. Buffered sensitive plant populations will be mapped and identified in the field
	Machinery, fire ignition, tree felling, anchor trees, and slash piling would not occur within an identified sensitive plant buffer.
	Proposed alterations to locations of temporary roads and log landings will follow standard contact provisions for the protection of rare plants, along with the timely involvement of the Forest Botanist or alternate specialist designated by the Forest Botanist. Rare plant populations would be protected by a minimum 100' buffer. Use of existing roads within 100' of population is allowed.
	Prescribed fire would not be allowed to creep into buffered areas
	Treat invasive plants inside the sensitive plant buffers
<b>INVASIVE PLANTS</b>	
Reduce the risk of invasive plant introduction and spread into or out of the project area	Integrate invasive plant prevention and management in all proposed units and prescribed burning units (FSM 2080).
	Treat areas with high-risk invasive plants infestations (as defined in Regional Risk Assessment Factors and Rating protocol) before burning. Monitor treatment success after burning and retreat if necessary.
	Treat invasive plants before obliterating decommissioned roads; rehabilitate as described in soils section above.
	Remove all mud, soil, and plant parts from off-road equipment before moving into the project area. Off-road equipment will be inspected prior to entering the project area by a timber sale administrator or other Forest Service personnel.
	We strongly encouraged vehicles intended for travel on established roads are cleaned before their first entry into the project area. All vehicle and equipment cleaning must occur off National Forest System lands.
	Avoid locating hand-piled slash in the leafy spurge infested area of Unit 26.
	All gravel and borrow sources located outside the project area must be inspected and approved by the Forest's Invasive Species Specialist, Forest Botanist, or designated representative prior to transport into the area.
	Strongly encourage regular inspection, removal, and proper disposal of invasive plant parts and seed found on clothing and equipment.
Pre and post-harvest treatment actions to suppress and contain the spread or increased density of existing invasive/noxious weed species (Herbicide application)	Haul routes will be treated prior to log haul.
	Haul routes will be treated following completion of log haul.
	Haul routes will be treated in subsequent years following completion of log haul, as necessary.
	New invasive plant sites will be treated following completion of the timber sale.

OBJECTIVE	DESIGN FEATURE
Biological Control Treatment	Initiate additional introductions of <i>Chrysolina</i> spp. into higher elevation infestations of St. Johnswort and 3 successive years of introductions in units 23 and 25 beginning in 2016
	Initiate <i>Cyphocleonus achates</i> releases in heavier density open overstory stands of spotted knapweed beginning in 2016
Revegetation	Re-establish vegetation using native species on sites with soil disturbed by timber harvest. Use methods and prescriptions shown to be highly effective at competing with invasive plants.
	Use only certified weed free seed and mulch during revegetation implementation. Certification must meet State of Montana standards for species content in any seed mix used. Timber purchaser is strongly encouraged to meet North American Invasive Species Management (NAISM) standards in seed mixes used in project area.
	Use only seed mixes, proportions, and application prescriptions approved by the Forest Botanist and included in the contract specifications. Proposed modifications to prescribed seed mixes must be approved by the Forest Botanist prior to purchase of the seed by the contractor.
<b>HERBICIDE USE</b>	
Protect water quality	Herbicides will not be used to control weeds within a 100-foot radius of any potable water spring development, stream, or diversion within the project area.
	Mixing and loading tanks will occur more than 300 feet from live water where possible. No mixing will occur within 100 feet of live water
	Use of herbicides and surfactants adhere to mitigation measures and design criteria in the Weed EIS (2003) O:\NFS\Bitterroot\Program\2900InvasiveSpecies\InvasivePlants\nepa\2003-FEIS, or updates to the document.
<b>TIMBER MANAGEMENT</b>	
Provide for public safety	Hauling Operations – Dust abatement for log hauling will be completed on sections of roads in the project area that are in the immediate vicinity of residences.
	Develop agreement with Ravalli County for managing traffic and maintaining Blue Jay Lane and Hayes Creek Road during timber sale.
Prevent the spread of annosus root disease	Apply borate to freshly cut ponderosa pine stumps greater than 12 inches in diameter (inside bark).
	Minimize damage to residual trees during harvest
Prevent bark beetle population increases	If extensive beetle activity is observed in green-attacked trees within one mile of harvest units, it is desirable to consider limiting timber harvest during the flight period in July and August.
Prevent pine engraver ( <i>Ips</i> spp.) population increases	The most effective cultural practice to prevent <i>Ips</i> colonization is to avoid harvesting activities between October and June because it reduces the time <i>Ips</i> beetles have to complete their lifecycle. However, avoiding harvest during this period is not often feasible so the following methods would be used:

OBJECTIVE	DESIGN FEATURE
	Green slash exceeding 3" in diameter would be lopped into 2-3 foot lengths and scattered in areas with direct exposure to sunlight. Treating the slash in this way reduces Ips habitat quality because the slash dries out before the beetle brood can mature. All fresh slash and logs would be located several yards away from living trees.
	Piling slash in large-sized piles can provide suitable host material in the middle of the pile that lures Ips deeper into the pile. Ideally, piles should be at least 10 x 10 x 20 feet in height x width x length.
	Should small slash piles be constructed from October to June, infested material can be burned, chipped, or otherwise destroyed prior to beetle emergence in early July. Surveys of host material prior to July can indicate the risk of tree mortality or top kill to residual stems in treatment units. In high-risk areas where Ips mitigation options are limited, mass trapping of Ips with pheromone lures and Lindgren funnel traps may reduce Ips-related damage to residual stems.
	The silviculturist, wildlife biologist, and fuels specialist would conduct post-harvest exams before underburning units to evaluate the completeness of vegetation treatments
<b>SCENERY</b>	
Subordinate management activities to the natural character of the landscape and maintain trail aesthetics	Lost Horse Road (Units 7d, 7e, 7f, 10 26, 40); Roaring Lion Road and Trail #208 (Unit 1) - When feasible, minimize visible log landings, skid trails, and roads along Lost Horse Road, Roaring Lion Road, and Trail #208.
	Retain a vegetation buffer between Lost Horse road and the quarry and gravel stockpile on Lost Horse Road (Unit 7d).
	Cut stumps to 6 inches or less within 125 feet of Lost Horse Road, Roaring Lion Road, Observation Point parking area, and Trail #208 (includes Units 1, 7d, 7e, 7f, 9c, 10 26, 40)
	When feasible, new skid trails that cross travel routes should cross at right angles and curve after crossing. Lost Horse Road (Unit 7d, 7e, 7f, 10. 40); Roaring Lion Road and Trail #208 (Unit 1); Trail #125 (Unit 3f); Trail #127 (Unit 2a, 2b, 2c, 36 and 39)
	Lost Horse Road (Unit 7d, 7e, 7f, 10 26, 40,); Roaring Lion Road and Trail #208 (Unit 1); Trail #125 (Unit 3f); Trail #127 (Unit 2a, 2b, 2c, 20, 36 and, 39); Observation Point (Unit 9c) -
	Slash piles visible from Lost Horse Road, Roaring Lion Road, Observation Point, Camas Lake Trailhead, Ward Mountain Trailhead, and Trails #208, 125, and #127 will have priority for burning and will be burned as soon as feasible. Landings and slash pile locations will be rehabilitated as stated in the soils design criteria (includes Unit , 7d, 7e, 7f, 10, 26, 40.);Rehabilitate landings, skid trails, and temporary roads as described in soil design features and re-seed with plant species similar to those in the surrounding area (check with the Forest Botanist or Native Plant Coordinator).
	Remove slash and cut stumps to 6 inches or less within 50 feet of Trail #208, Trail #125, Trail #127 (includes Units 1, 2a, 2b, 2c, 3f, 36, and 39)

OBJECTIVE	DESIGN FEATURE
	Mask tree marking paint with paint color similar to the tree bark along Lost Horse Road, Roaring Lion Road, and Trail #208 and 127, if it is visible at the close of the sale (includes Units 1, 7d, 7e, 7f, 10).
	Transition the density of ponderosa pine on the edges of the aspen units and avoid straight lines and right angles to create a natural appearing edge between the two stand types, if needed (includes Units 36, 37, 38, 39, 40, 41)
	All units - Reduce the contrast between treated and untreated forest by softening the edges, retaining some understory trees, and blending tree density on the unit borders.
	Reduce visual contrast of skyline corridors. To the greatest extent possible locate skyline corridors so they are not directly aligned with sensitive views, using lateral yarding, vary the distance between cable corridors, or establish corridors more frequently than every 75 feet to allow for narrower (less visible corridors) (includes Units 3a, 3b, 3c, 7c, and 9b)
	Retain trees one tree-height below roads and landings (including cable landings) to screen them from Highway 93 corridor, where feasible. Avoid creating straight edges of trees by retaining clumps of trees and single trees with varied spacing (includes Units 2c, 3a, 3b, 3c, 3d, 4a, 4b, 5, 7c 9c, 9b, and 9d).
<b>FIRE AND FUELS</b>	
Control of prescribed fire	Prescribed fire will include protection measures for cultural or sensitive plant species prior to burning.
	Fire control handlines would be constructed as needed to protect specific resources. Existing roads, trails, drainages, wet meadows, rocky outcrops, and other natural barriers would be used as control lines, where possible. Fire will be allowed to burn outside of unit boundaries and back into RHCAs outside of the units. Handline would be rehabilitated post-fire
	Excessive slash and duff mounds around specific trees, slash may be pulled back to reduce scorch and/or mortality during burning.
	Landing and hand piles will generally be ignited during late fall or early winter.
<b>AIR QUALITY</b>	
Maintain air quality	The Forest Service will submit a burn plan and obtain burn approval from the MT/ID Airshed Group before igniting a burn and burn only when ventilation is rated good or better in compliance with our open burning permit.
	The Forest Service will notify residents within proximity to the burn areas by mail, email, message or phone, and/or press releases before burning. Signs warning of potential visibility impairment or temporary area closures would be posted as needed along roads during ignition operations.
	Larger burn blocks may be burned over multiple days in order to reduce short term smoke impacts. For pile and landing burning, short term impacts may be lessened by reducing the number of piles burned
	All prescribed burns will be monitored visually. If a prescribed burn appears to be generating an unacceptable level of smoke, ignition would be stopped as reasonably possible.

OBJECTIVE	DESIGN FEATURE
<b>RECREATION MANAGEMENT</b>	
Protect public safety	Place area closure signs and maps at trailheads and on trails during harvest and rehabilitation operations.
Prevent damage to existing trail features	All structures will be marked on the ground and the sale area map.
	All trees or posts with trail signs or related information shall remain in place or be replaced in-kind
	Use existing trails for skidding and temporary roads as much as possible
	All trails and their constructed features in the project area will be maintained, restored, or replaced in-kind to their original design according to the USDA Forest Service Standard Trail Plans and Specifications.
Reduce disruptions of public use on trails	Identify alternative parking areas for trails when operations are near trailheads.
	Timber sale operations should be completed within 3 years, except as required by contract obligations
	Seasonal timing of the project and log hauling may be restricted as agreed by the District Ranger and Contracting Officer. Otherwise, log hauling will not occur on weekends or holidays
Protect trail aesthetics	Existing unauthorized trails used in timber sale operations but are not part of the trail system will be obliterated and rehabilitated by subsoiling, seeding, fertilizing, and covering with slash
Prevent unauthorized trail development and motorized access through newly logged units and on skid trails	Use signage, slash, downed logs, earthen humps or berms, or boulders as well as increased agency presence in the area
<b>HERITAGE RESOURCES</b>	
Protect historic logging railroad grades	Ground disturbing activities over historic logging railroad grades will be restricted to previously disturbed portions of those grades.
Protect cultural sites within the project area	No ground disturbance or pile burning would occur on known archaeological sites or historic structures. Report new discoveries of cultural material to the Forest Heritage specialist. Consult with the Forest Heritage Specialist during road and cutting unit design, and when fuels treatments will occur in areas where heritage sites are present.
Protect cambium-peeled trees.	No removal of cambium-peeled ponderosa pine trees. No ground disturbance or herbicide use within the dripline of cambium-peeled trees. Employ directional falling of trees within one-and-a-half tree lengths of cambium-peeled trees. Employ hand removal of shrubs, ladder fuels, and surface duff layers prior to underburning. Report new discoveries of cambium-peeled trees to the Forest's Heritage specialists.

### ***Best Available Science***

I am confident that the analysis of this project was conducted using the best available science. My conclusion is based on a review of the record that shows my staff conducted a thorough review of relevant scientific information, considered responsible opposing views, and acknowledged incomplete or unavailable information, scientific uncertainty, and risk (Westside EA Chapter 3).

**Table DN- 5: Comparison of Alternatives in the Westside Collaborative Vegetation Management Project at Meeting the Purpose and Need.**

<b>Purpose and Need Criteria</b>	<b>Alternative 1</b>	<b>Alternative 2</b>
Area of bark beetle risk (acre)	3,922	1,349
Fire type: (acre)		
surface fire	2,454	3,742
passive crown fire (torching)	3,124	1,925
active crown fire	95	6
Area of meadow	58	58
Area of aspen	92	92
Direct Jobs <sup>1</sup>	0	44
Total Jobs	0	77

**Table DN- 6: Comparison of Effects between Alternative 1 and Alternative 2.**

<b>Resource</b>	<b>ALTERNATIVE 1</b>	<b>ALTERNATIVE 2</b>
Area of reduced bark beetle risk(acre)	0	1,131
Area of reduced dwarf mistletoe infection (acre)	0	218
Continues management of previous treatments	No	Yes
Fuels	Fuel levels continue to increase beyond historic ranges	Fuel levels maintained within historic ranges
No Restriction, Open Yearlong to street legal motorized	19.9	18.7
Closed yearlong, Undetermined roads	5.1	0
R-1: Closed yearlong to all motorized (NFSR)	1.7	6.0
Decommissioned, no motorized travel	0	5.9
Recreation trails	No Effect	Disrupt recreation use for 3-5 years on Coyote Coulee trail and for a few weeks at Ward Mtn. trailhead.
Roadless Expanse	No effects on Selway-Bitterroot IRA or unroaded expanse	No effects on Selway-Bitterroot IRA. Proposed activities would affect 2.3% of the roadless expanse. All activities in the roadless expanse would occur in the unroaded area.
Snags	Snag numbers would continue to increase due to insects and disease.	Snag numbers would decline in both short and long terms due to harvest and reduced risk of tree mortality due to insects and fires.
Elk Habitat Effectiveness	No Change	Improves in one third order drainage.
Elk Security	No Change	Declines due to reduction of hiding cover.



constructed, re-routed, added to the National Forest System Roads, or decommissioned. However, prescribed burning under previous decisions would be implemented when weather and fuel conditions fit the prescription parameters. Current management of roads and trails would continue.

If I chose Alternative 1, it could be 10 or more years before the area would again be analyzed. By then, potential fire behavior would substantially increase. Areas that support passive crown fire would likely transition to support active crown fire. Likewise, areas that support surface fire would transition to support passive crown fire. In the event of a crown fire, direct attack is not possible so any values at the fire front would be lost or dramatically changed for the foreseeable future.

In addition to increasing potential fire behavior, the risk of mountain pine beetle outbreaks would continue to increase as stand density increases and stand structures become more uniform. As many participants in this planning effort have pointed out, once an outbreak is in progress, stand treatments have little potential to control or restrict it. Choosing Alternative 1 would jeopardize the development of old growth habitat in these low elevation habitats and impair our ability to maintain forest cover and trail aesthetics in the long-term.

***Alternatives Considered but not Carried Through the Analysis***

Several alternatives to the proposed action were suggested during public scoping (Table DN-7). These alternatives were considered but not carried through the analysis for the reasons also stated in Table DN-7.

***Table DN- 7: Proposed alternatives considered but not carried through analysis and the reasons they are not analyzed.***

PROPOSED ALTERNATIVE	REASON NOT ANALYZED
<b>OUTSIDE THE SCOPE OF THE PROJECT</b>	
Develop a plan to enhance recreation opportunities at lower elevations on the forest	The main purpose of the Westside project is to improve forest resilience to insects, disease, and fire, and trend forest conditions toward those typical of the landscape. Enhancing recreation opportunities does not change forest conditions that would modify insect and disease infestations or fire behavior. Recreation opportunities affected during project implementation are assessed in the effects analysis.
extending the Coyote Coulee trail system	Extending the Coyote Coulee trail system does not change forest conditions that would affect the project purpose and need.
developing a plan to restore fully functioning fish habitat	To restore fully functioning fish habitat is outside of Forest Service jurisdiction and beyond the scope of this project. This alternative would require removing ditches, diversions, and impoundments on National Forest and private lands that are beyond Forest Service regulatory jurisdiction.
re-introducing cattle	Cattle would consume fine fuels and may inhibit regeneration within the project area but they do nothing to decrease stand density, modify fuel arrangement, or consume large woody debris that would carry fire or increase forest resilience to insects and disease.

PROPOSED ALTERNATIVE	REASON NOT ANALYZED
extend the project boundary north to include another 250 acres	Though there may be a need to treat this area, the Westside project boundaries are based on geographical features that are readily identifiable on the ground. Extending the project area to include these 250 acres would increase the project size by almost 7,700 acres and substantially increase the complexity of the analysis. In addition, an analysis of this type would likely dilute the effects of the current project. Environmental analysis of the treatment for these 250 acres may occur at a later date when funding and priorities allow.
<b>DOES NOT MEET THE PURPOSE AND NEED</b>	
use only non-commercial thinning in areas that do not have road access	Non-commercial thinning would only remove trees less than 7 inches DBH. This treatment would not remove enough trees or create enough space between tree crowns to improve stand resilience to mountain pine beetle or affect fire behavior. In some cases, the diameter limit can be increased to 10 inches DBH but can create excessive ground fuels and increase potential fire behavior. Falling commercial-sized trees (7-10" DBH) but leaving them on site would increase dead and down fuel and create more continuous fuel arrangement that would sustain combustion and fire spread. These conditions would increase fire behavior.
use prescribed fire only	Stand density and fuel concentrations are too high to use only fire to achieve restoration objectives. Stands need to be thinned to minimize damage to merchantable timber and the forest. Burning without harvesting or thinning timber first could create fire behavior that would threaten adjacent private forested land, infrastructure, and residences.
eliminate any impacts on the Coyote Coulee trail system	Coyote Coulee trail system is in MA 2 and 3a. Timber harvest is a compatible use in these management areas. Though it is not possible to eliminate all impacts to the trail system and meet the project purpose and need, design features will greatly reduce their effects and duration. Avoiding the Coyote Coulee trail system would not reduce stand densities or fire risk adjacent to the trail or National Forest boundary. One portion of the trail system is not proposed for treatment at this time because it was treated in the last 10 years with similar design features.
light thin only directly adjacent to the National Forest boundary	This treatment would not reduce fuel loads and composition enough to measurably change fire behavior. This type of treatment would not decrease stand susceptibility to future infestations of pathogens and bark beetles.

PROPOSED ALTERNATIVE	REASON NOT ANALYZED
<p>an alternative proposed that would exclude:</p> <ul style="list-style-type: none"> <li>o Any management actions that directly affect habitat, soils, or water in the Selway-Bitterroot IRA or other unroaded areas;</li> <li>o Any new road construction (including temporary and system roads), except that proposed to replace the poorly located road, as long as its access need has been legitimately determined using the Transportation Analysis Process (36 CFR 212) and as long as the replacement road has been legitimately identified as part of the forest-wide MRS;</li> <li>o Maintaining existing roads so that the Forest Plan elk habitat effectiveness standard is not met;</li> <li>o Any activities that would affect bull trout critical habitat in the Lost Horse Creek watershed;</li> <li>o Any activities that require a Forest Plan Amendment regarding scenery.</li> <li>o Road building "through the middle of (the goshawk) nest cluster."</li> </ul>	<p>The effects associated with this alternative have been analyzed in the no action alternative.</p> <p>This is essentially the no action alternative (Alternative 1) because management by definition affects wildlife habitat, soils, and water. Effects of activities proposed in Alternative 2 would be within standards.</p> <p>71% of the area would not be treated if no roads are built. Stand densities would not be reduced enough to alleviate bark beetle risk or reduce fuel loads and meet the purpose and need.</p> <p>Alternative 2 brings the Lost Horse 3<sup>rd</sup> order drainage closer to compliance with the elk habitat effectiveness (EHE) standard but does not change EHE in the Hayes Creek 3<sup>rd</sup> order drainage.</p> <p>Another alternative that addresses effects on bull trout is not needed because the no action alternative has no effect on bull trout critical habitat. Alternative 2 includes design features that would have some positive effects on bull trout and limits negative effects to the level of "May Affect, Not Likely to Adversely Affect".</p> <p>Treatments are proposed to enhance the resilience of the forest to bark beetle infestation and fire. The effects of the proposed treatments on scenery are analyzed in the environmental effects.</p> <p>There are no standards or regulations that prevent building a road near goshawk nest clusters. Goshawk typically build several nest clusters and rotate their use.</p>
<p>winter log only</p>	<p>The combinations of snow and frozen soil depths needed for winter logging would seldom be met in the low elevation project area and make it extremely difficult to achieve project objectives in a reasonable time frame. There is also potential that an unnecessary requirement of this nature would overly encumber the project to a point it is not economically viable to implement.</p>
<p>educate the adjoining landowners on mitigating fire hazard</p>	<p>Public education on the topic of mitigating fire hazard and creating defensible space is an active campaign for the Forest Service and their partners. Evidence of this can readily be seen on private lands adjacent to the project area where landowners have treated portions of their properties (Ch. 3 Table 7). The purpose and need for the Westside project is to treat National Forest.</p>

PROPOSED ALTERNATIVE	REASON NOT ANALYZED
<b>PROPOSED CHANGES OR ALTERNATIVES TO THE PROPOSED ACTION</b>	
proposed alternative route to Unit 2c as a temporary road from Camas Creek Road (NFSR 496)	The Forest Service considered constructing a road from NFSR 496 (Camas Cr. Rd) into Unit 2c but decided against it because the slopes are steep, the road would require several switchbacks that would be highly visible from the HWY 93 corridor, and road maintenance would be expensive. The proposed road location would be easier to maintain on the gentler slopes and less visually intrusive. The proposed road is necessary for future forest management and would be managed as a permanent road.
prevent new weed infestations and restore native plant populations	The design features for Alternative 2 identify strategies to prevent, control, and eradicate new weed infestations. Included in the design features are requirements to inspect and wash off-road equipment, minimize soil disturbance, introduce biological controls to target specific invasive plants, apply herbicides in specific areas before and after timber harvest, reseed disturbed areas with local, native seed and in some cases re-plant with native vegetation.
A proposal to helicopter yard Units 2a, 2b, and 2c to avoid road building into these units and prevent impact to the Coyote Coulee trail system	<p>Helicopter logging is a method of yarding timber from the forest to a landing where the logs can be loaded on a log truck and transported to the mill. The feasibility analysis of using helicopters to yard logs from the units indicates the sale would be deficit 1.1 million dollars (PF-Econ-001). Though helicopter yarding would reduce the amount of road construction, a bridge and road across Camas Creek would still be needed because of the yarding distance capabilities of helicopters (PF-Econ-004). Locating helicopter landings on private land could reduce road construction, but does not necessarily make helicopter logging a viable alternative. A temporary access agreement can be easily revoked by the landowner for a variety of reasons, such as a change in ownership or the landowner changes his/her mind. Revoking the agreement would potentially derail an active timber sale contract and subject the government to lawsuit from the timber purchaser for lost revenue.</p> <p>Other concerns, though not considered in the feasibility analysis, are safety hazards and noise. The noise level of a helicopter logging operation can exceed 100 decibels whereas log trucks are around 50 decibels. Safety hazards associated with helicopter yarding include the potential for knocking over snags, tree limbs, or other loose debris with the</p>

PROPOSED ALTERNATIVE	REASON NOT ANALYZED
	rotor wash and dropping loads. Though these hazards can be managed, they need to be considered when working in areas with high public exposure.
<p>A proposal to harvest more intensively in the Selway-Bitterroot IRA between Roaring Lion Creek and Gold Creek.</p>	<p>In the development of Alternative 2, treating north-facing slopes was considered but not proposed because of the potential for these treatments to adversely affect inventoried roadless area character, limited wildlife habitats in the area, and visual resources. Field inventories on these slopes indicate trees are generally of commercial size and would require commercial harvest. Removing the timber from the area would require a new road system in the Selway-Bitterroot IRA. Though the 2001 Roadless Rule allows road construction in IRAs for certain activities, these activities are in cases of imminent threat, or needed to meet reserved or outstanding rights. In addition, the removal of timber must be generally small diameter and maintain or improve one or more of the IRA characteristics (PF-Roadless-003).</p> <p>The VOO for the IRA is retention and commercial treatment of these slopes would generally require skyline yarding. The visual effects of the road system and cable corridors would not meet the retention criteria in addition to having a high potential of degrading one or more of the Selway-Bitterroot IRA characteristics.</p> <p>In addition, the north-facing slopes maintain vegetation and habitat diversity that support a goshawk nest cluster used since 1996, fisher and marten habitat corridors, and elk security habitat. Cutting large trees from the canopy and leaving them on site would increase the surface fuel loads and be counterproductive to the project purpose and need. Yarding the logs with a helicopter was also considered but met with the same economical, logistical, and environmental constraints identified in the proposed alternative above.</p> <p>Given the potential to adversely affect IRA characteristics, visual character, and wildlife habitat, the Interdisciplinary team chose to focus on non-commercial restoration treatments of meadows (predominately located on south facing aspects) in the IRA.</p>

**Public Involvement and Collaboration**

The collaborative process is one that is transparent, non-exclusive, and includes multiple persons representing diverse interests. Though a portion of the Westside Collaborative Vegetation

Management project was initiated by the BRC, many persons have been included in the scoping process through many venues.

The northern portion of the Westside Project was initially proposed by the BRC. The Forest Service included it in their proposal to treat the southern portion of the project area and analyze the entire area in compliance with NEPA. On July 22, 2015, prior to the start of the NEPA process, the Bitterroot National Forest held an open house to provide the public the opportunity to view maps and displays, ask questions, and offer comments about the initial proposal for the Westside Project. Approximately 50 people attended and 25 submitted comments. After considering their comments and changing the proposed action based on them, the scoping package for the project was released for 30-day review and comment on August 27, 2015.

The Bitterroot National Forest mailed the scoping package to about 159 individuals and organizations, State and Federal agencies, the tribal chairman for the Confederated Salish and Kootenai Tribes of the Flathead Reservation, and elected Federal, State, and County representatives. In addition, the Bitterroot National Forest issued a news release and legal notice about the Westside Project in the Ravalli Republic and several other newspapers picked up the story. During the comment period, representatives of the Bitterroot National Forest met with four adjacent landowners who requested the meetings, and briefed the BRC, Ravalli County Commissioners, Selway-Pintler Wilderness Chapter and the Bitterroot Chapter of the Backcountry Horsemen, and the Ravalli County Off-road Users Association. The Forest also posted a Question and Answer document about the Westside Collaborative Vegetation Management project on the Bitterroot National Forest web-site.

The Bitterroot National Forest received 80 comment letters on the proposed action. They reviewed the comments for possible alternatives to the proposed action that would meet the purpose and need for the project. Though many suggestions were received, they did not support the development of a new alternative that would be carried through analysis (Table DN-7). Some of the suggestions:

- were considered during the early development of the project
- inspired changes to the proposed action
- would not meet the purpose and need for the project
- were addressed with design features of the proposed action (Table DN-4).

Bitterroot National Forest representatives continued briefing the BRC, Ravalli County Commissioners, and individuals who requested additional information after the comment period closed.

The Decision Notice and Finding of No Significant Impact (FONSI) for the Westside Collaborative Vegetation Management project was circulated with the EA for 30 days between March 18 and April 18, 2016. Sixteen objections were received and responded to. The Objection Reviewing Officer held an objection resolution meeting with objectors May 13, 2016. He heard their issues and ideas for resolving them. The Objection Reviewing Officer provided me with instructions to clarify and update information that better demonstrates compliance with law, regulation, and policy (Refer to Considerations Following the Pre-decisional Review Process, pg. 1).

## **Finding of No Significant Impact**

The following is a summary of the project analysis to determine significance, as defined by Forest Service Handbook 1909.15\_05. "Significant" as used in NEPA requires consideration of both context and intensity of the expected project effects.

**Context** means that the significance of an action must be analyzed in several contexts such as society as a whole, the affected region, interests, and locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

**Intensity** refers to the severity of the expected project impacts and is defined by 10 points.

### *Context*

The Westside project is limited in scope and duration. The analysis area boundary does not exactly follow the 6<sup>th</sup> order watershed boundaries because only the Camas/Gold Creek portion of the Bitterroot-Lick Creek 6<sup>th</sup> order watershed (HUC 170102050807) includes the project area. Including the whole Bitterroot-Lick Creek 6<sup>th</sup> order watershed in the analysis area would extend the analysis to areas well beyond the project's potential to affect them (such as Lick Creek) and would unreasonably dilute project effects (Westside Project EA pg. 3-151). Most of the project area is in the Camas/Gold Creek unit of the Bitterroot-Lick Creek 6<sup>th</sup> order watershed, and less than 5% of the South Lost Horse, and less than 1% of the Roaring Lion 6<sup>th</sup> order watersheds is in the project area (Westside Project EA pg. 3-135). These 6<sup>th</sup> order watersheds form the water resources cumulative effects boundaries of the project analysis. Alternative 2 would commercially harvest about 1,349 acres in the 5700-acre project area. Irregular harvest will occur on about 799 acres, improvement harvest would occur on 506 acres, and overstory conifers would be felled on 92 acres of aspen and removed from 44 acres. These treatments would improve forest resilience to insects, disease, and fire, create uneven-aged forest structure, and rejuvenate aspen stands. Non-commercial thinning would occur on 978 acres to improve resilience to insects, disease, and fire, and restore meadow and aspen habitats.

The project was designed to minimize environmental effects through the application of design features (Table DN-4), Best Management Practices and Soil and Water Conservation Practices (Appendix A), Forest Plan standards, and current research (Westside EA Ch 3). Effects of Alternative 2 are localized and largely confined to the project area (Westside Project EA pages 3-48, 60, 70, 72, 73, 79, 82, 83, 88, 92, 100, 102, 107, 117, 122, 127, 140, 141, 152, 161, 164, 178, 182). Cumulative effects of previous projects combined with the current project and reasonably foreseeable projects are disclosed in the Westside Project EA for each resource (Westside Project EA Chapter 3).

### *Intensity*

The following factors were considered to evaluate intensity.

**1) Impacts may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on the balance the effects will be beneficial.**

I considered both the beneficial and adverse effects of the Westside Project alternatives as presented in Chapter 3 of the EA. The potentially adverse impacts are within Forest Plan standards and guidelines (Westside EA Chapter 3) and are of short duration (3-5 years) except for elk habitat effectiveness in two third order drainages and visual quality of six skyline units. The elk habitat effectiveness is improved in one third order drainage but both third order drainages do not meet the Forest Plan standard and will not meet it following implementation of this decision (Westside EA pg. 3-114). To meet the Forest Plan standard, portions of main, arterial roads would need to be closed and would inhibit motorized access to destination points. The three other third order drainages in the project area well exceed the Forest Plan elk habitat effectiveness standard and may compensate for the 1% and 6% shortfall in other two third order drainages, respectively. Additionally, the analysis area exceeds the Forest Plan standard of maintaining elk population at 1987 levels (Westside EA pg.

3-116), which indicates that elk are able to compensate for the deficiency in elk habitat effectiveness (Westside EA pg. 3-117).

The skyline units may not meet middle ground partial retention or retention criteria within one year of harvest because of their slope position and the horizontal and vertical lines created by the skyline corridors and roads accessing the units. Five of the skyline units are in partial retention and one unit is in retention. The project includes design features from the scenery manual to address these concerns (Westside EA pg. 2-19). Though it is uncertain whether the conditions for partial retention and retention can be met within a year of harvest, I believe these units will blend with the surrounding landscape within a few years of harvest. I base my conclusion on photographic monitoring from Trapper Bunkhouse, the small size or visible portions of the units, the amount and configuration of the trees remaining after harvest, and the distance from the viewing areas.

Other potentially negative impacts include the risk of spreading invasive plants, soil disturbance, detracting from the recreation experience during logging operations, reductions in visual quality, and wildlife habitat quality. I believe the design features implemented through this decision will limit the degree of adverse impact (Table DN-4, Westside EA p. 3-79, 99, 125, 160-162, 169, 176). Conversely, I believe the benefits of improving forest resilience to insects, disease, and fire by implementing Alternative 2 will protect the recreation experience and wildlife habitats in the long-term (Westside EA pgs. 63, 73, 88, 91, 92, 99, 101, 104, 107, 117, 118, 120, 127, 129, 132, 165). The Westside project will increase the amount of aspen in the area, retain large diameter ponderosa pine and Douglas-fir, and create forested conditions that are sustainable in the long-term (Westside EA p. 3-29, 30).

**2) The degree to which the proposed action affects public health or safety.**

By incorporating the design features for recreation and air quality (Westside EA pgs. 2-19, 20), I believe the proposed project will not have significant adverse effects on public health and safety (Westside EA pg. 3-182).

**3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.**

The Westside project will not affect historical or cultural resources (Westside EA pg. 3-178), or wetlands (Westside EA pg. 3-145). The project area does not contain any park lands, prime farmlands, wild and scenic rivers, or ecologically critical areas. The project is similar to other areas at the foot of the Bitterroot Mountains in the same elevation zone (Westside EA pgs. 3-66 – 3-69).

**4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.**

The effects on the quality of the human environment are not likely to be highly controversial. Effects analysis was conducted using scientific literature (Westside EA Chapter 3, Literature Cited) and the interdisciplinary team reviewed literature cited in public comments (PF-Objection-024, 027, 028, 029, PF-Scoping-117). Concerns were expressed about the safety of log truck traffic on two county roads, Blue Jay Lane and Hayes Creek road. Ravalli County is responsible for the maintenance of these roads. The Forest Service is considering options with Ravalli County and the residents along these roads to help maintain the road during timber sale operations. This is an administrative issue and not one that can be resolved in this analysis. No highly controversial or significant issues related to the human environment were identified during scoping or through the analysis process (Westside EA Ch. 1 11-16, Ch2 pgs. 21-25).

**5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.**

The Westside project is similar to other timber harvest projects that have occurred on the Bitterroot National Forest recently, such as Larry-Bass, Elk Bed, Sweeney Creek, Trapper-Bunkhouse, and Lower West Fork timber sales. These projects did not cause significant effects on any resource. Scientifically accepted analytical techniques, available information, and best professional experience and judgment were used in the Westside analysis (Westside EA Chapter 3). I conclude that there are no uncertain or unique characteristics in the project area which have not been previously encountered or that would constitute an unknown risk to the human environment.

**6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

The Westside project will not set a precedent for future actions with significant effects. The project activities are consistent with the Bitterroot National Forest Plan (Westside EA Ch 1 pgs. 16-22, Chapter 3) and similar in nature and effects to many other projects (listed in 5 above) on the Bitterroot National Forest. This project does not represent a decision in principle about a future consideration.

**7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.**

The Westside project is not related to other actions that have individually insignificant but cumulatively significant effects. No significant cumulative effects were identified through the Westside project analysis (Westside EA Chapter 3).

**8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in the National Register of Historic Places or may cause loss or destruction of significant cultural or historical resources.**

Fifteen cultural sites are located within the project area. None are listed in the National Register of Historic Places but ten have been determined eligible, four are not eligible, and one site remains unevaluated (a private ditch). Montana State Historic Preservation Office has concurred that with the application of design features in the Westside project (Table DN-4), the project will have No Adverse Effect on significant cultural resources (PF-HERITAGE-002).

**9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act.**

Threatened or endangered terrestrial wildlife species, or their suitable habitat are not known to occur in the Westside project area, except a small edge of Canada lynx habitat and about 16 acres of predicted wolverine habitat overlap the higher elevations on the western edge of the project area. None of the predicted habitats are within treatment units (Westside EA pg. 3-75, PF-WILD-057). The wildlife biologist determined the Westside project would have *No Effect* on Canada lynx or Yellow-billed cuckoo (PF-WILD-055) and there would be *No Jeopardy* on wolverine (PF-WILD-058).

No threatened or endangered plant species were found in the Westside project area (EA pg. 3-162, PF-RarePlants-001).

Bull trout (*Salvelinus confluentus*) is listed as a threatened species with critical habitat in Lost Horse Creek and the Bitterroot River. The fisheries biologist determined the Westside project *May Affect, not likely to Adversely Affect* bull trout or their critical habitat. There is a slight potential that activities in Moose Creek may create sediment that would be transferred to Lost Horse Creek and activities in Hayes and Camas Creeks may create sediment that could be carried to the Bitterroot River (PF-Fish-012). Alternative 2 design features are expected to prevent the creation and transfer of sediment into stream channels (PF-FISH-012).

**10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.**

The Westside project does not threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment. Consistency with applicable laws, regulations, and the Bitterroot National Forest Plan were considered in the Westside Project EA (Ch. 1 pgs. 16-27).

***Conclusion***

After considering the environmental effects described in the Westside EA and specialist reports, I have determined that Alternative 2 will not have significant effects on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared.

**Findings Required by Other Laws and Regulations**

***National Forest Management Act (NFMA)***

***Introduction***

On April 9, 2012, the Department of Agriculture issued a final planning rule for National Forest system land management planning (2012 Rule) (77FR 68 [21162-21276]). None of the requirements of the 2012 Rule apply to projects and activities on the Bitterroot National Forest because the Bitterroot Forest Plan was developed under a prior planning rule (36 CFR §219.17(c)). As the 2012 Rule explains, “[The 2012 Rule] supersedes any prior planning regulation. No obligations remain from any prior planning regulation except those that are specifically included in a unit’s existing plan. Existing plans will remain in effect until revised” (36 CFR §219.17).

**Site-Specific Forest Plan Amendment**

Implementation of Alternative 2 requires a site-specific forest plan amendment to elk habitat effectiveness, coarse woody debris, and visual quality standards in the 1987 Bitterroot National Forest Plan (EA Ch. 1 pg. 22, Ch. 3, Appendix B). Therefore, my decision includes an amendment to modify these three standards specific to the Westside project area (Appendix B).

Section 1926.51 of the Forest Service Directives ([www.fs.fed.us/emc/nfma/index5.html](http://www.fs.fed.us/emc/nfma/index5.html)) gives guidance for determining what constitutes a “significant amendment” under NFMA. I have used this guidance to determine that this site-specific forest plan amendment is not significant (Appendix B). This forest plan amendment will not significantly alter the long-term relationship between levels of multiple-use goods and services projected in the forest plan; and, it will not have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period. This amendment modifies standards and guidelines in the Westside project area at this time; it is not a long-term change. The public has been notified of this amendment throughout the NEPA process (PF-Scoping-001).

***FOREST PLAN CONSISTENCY***

Management activities are to be consistent with the Forest Plan (16 USC 1604 (i)). General management direction for the Bitterroot National Forest is found in the Forest Plan, which established Forest-wide and management area standards and guidelines (Forest Plan, Chapter II). This decision to manage the forest in the Westside project area is consistent with the goals and objectives of the Bitterroot National Forest Plan listed on pages II-2 through II-7. The project was designed to conform to Forest-wide standards while improving forest resilience to disturbances (Forest Plan pages II-18 through II-25, II-27 through II-29).

I have evaluated the alternatives and compared them to Forest Plan standards. Alternative 2 will meet Forest Plan Standards, as amended, and will contribute toward reaching Forest Plan goals and objectives (EA Ch. 1 pgs. 18-22).

The Forest Plan provides for maintaining diversity through management standards. This project is consistent with the Forest Plan as stated above. The Biological Evaluations and Biological Assessments confirm that this project will not impact the viability of sensitive, threatened and endangered species (EA Ch. 1 pg. 23, Ch. 2 pg. 26, 27, Ch3 pg. 162, PF-WILD-055, PF-FISH-012, PF-RarePlants-001).

*Other NFMA Requirements - I have determined the selected alternative is consistent with the following provisions of the National Forest Management Act:*

**1. 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 (16 USC 1604(k)).**

Stands proposed for harvest in the Westside project were examined for suitability in accordance with 36 CFR 219.12 (a)(2)(D)(ii). Units are suitable for timber management because they meet the definition of forestland described in 36 CFR 219.16, it is technologically feasible to harvest and ensure soil productivity and watershed protection, and none of the stands considered for harvest have been withdrawn from timber production (36 CFR 219.12(2)(A) and (B)). All sites considered for timber harvest would use established harvesting and site preparation practices. Bitterroot National Forest Plan standards, as amended by INFISH, and Best Management Practices (BMPs) are sufficient to protect soil and water resource values (EA pg. 1-18)

**2. Timber Harvest on National Forest Lands (16 USC 1604(g)(3)(E)): A Responsible Official may authorize site-specific projects and activities to harvest timber on National Forest System lands only where:**

**a. Soil, slope, or other watershed conditions will not be irreversibly damaged (16 USC 1604(g)(3)(E)(i)).**

Alternative 2 will not cause irreversible damage to the soil resource. Proposed activities that have the greatest effect on soil are ground-based yarding. Skid trails will be designated and historic skid trails will be used to the greatest extent feasible to limit new disturbances (EA pg. 1-17). The Westside Project protects organic matter, soil porosity, and topsoil by applying BMPs, SWCPs, and design features (Table DN-4). Localized and limited losses will occur on landings, skid trails, temporary roads, or where the soil is sterilized from burning slash. However, over most of the project area and the landscape, the processes that lead to soil productivity will be preserved (EA pg. 1-17).

The Westside project is likely to have minor effects on water resources because the activities would be located away from streams and the area of harvest is small relative to watershed size (EA Ch. 3 pgs. 140-145). The hydrology analysis indicates there is little potential to increase stream flow, sediment, or nutrients in the six project area watersheds.

**b. There is assurance that the lands can be adequately restocked within five years after final regeneration harvest (16 USC 1604(g)(3)(E)(ii)).**

Group selection harvests create openings in the forest canopy without departing from a fully stocked stand. Mature trees in and adjacent to the openings will provide site protection and local seed sources to promote tree regeneration. The stands will be managed as uneven-aged stands so a final regeneration harvest is not planned (EA pg. 1-17).

- c. **Protection is provided for streams, streambanks, shorelines, lakes, wetlands, and other bodies of water 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 (16 USC 1604(g)(3)(E)(iii)).**

There are no lakes or shorelines in the Westside project area. INFISH buffers adjacent to streams, streambanks, and wetlands would protect them from water temperature changes, stream blockages, and sediment deposits (EA Ch. 3 pgs. 152-157). Timber harvest in the Westside project area is not likely to seriously or adversely affect water conditions or fish habitat (EA Ch. 3 pgs. 144, 145, 152).

- d. **The harvesting system to be used is not selected primarily because it will give the greatest dollar return or the greatest unit output of timber (16 USC 1604(g)(3)(E)(iv)).**

The harvest systems in the Westside project were selected to meet the project purpose and need and based on the site-specific resource conditions (EA pg. 3-22). They were not selected primarily to give the greatest dollar return or the greatest output of timber.

3. **Clearcutting and Even-aged Management (16 USC 1604(g)(3)(F)): Insure that clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an even aged stand of timber will be used as a cutting method on National Forest System lands only where:**

- a. **For clearcutting, it is determined to be the optimum method, and for other such cuts it is determined to be appropriate, to meet the objectives and requirements of the relevant land management plan (16 USC 1604(g)(3)(F)(i)).**

There is no harvest designed to regenerate even-aged management in the Westside project area. Openings will be created in areas of root disease or dwarf mistletoe but the treated stands will be fully stocked after treatment. The size of the openings depends on the size of the infestation, generally 2-5 acres (EA pg. 1-18). Regeneration of resistant trees, typically ponderosa pine, would occur in the openings.

- b. **The interdisciplinary review as determined by the Secretary has been completed and the potential environmental, biological, esthetic, engineering, and economic impacts on each advertised sale area have been assessed, as well as the consistency of the sale with the multiple use of the general area (16 USC 1604(g)(3)(F)(ii)).**

The Westside interdisciplinary team analyzed the potential project effects on each resource found in the project area. The timber sale is consistent with the multiple use of the project and analysis areas (EA Chapter 3).

- c. **Cut blocks, patches, or strips are shaped and blended to the extent practicable with the natural terrain (16 USC 1604(g)(3)(F)(iii)).**

The small openings created in this project will blend with natural terrain and the edges will be feathered to avoid straight lines (EA Ch. 2 pgs. 18, 19)

- d. **Cuts are carried out according to the maximum size limit requirements for areas to be cut during one harvest operation, provided, that such limits shall not apply to the size of areas harvested as a result of natural catastrophic conditions such as fire, insect and disease attack, or windstorm (FSM R1 supplement 2400-2001-2 2471.1, 16 USC 1604(g)(3)(F)(iv)).**

Openings created by harvest in this project will be less than 40 acres (EA pg. 1-17).

- e. **Such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the timber resource (16 USC 1604(g)(3)(F)(v)).**

Timber harvest proposed in the Westside project is consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources (EA pg. 1-17, Ch. 2 pgs. 11-20, and Chapter 3). Regeneration harvests are not proposed in this project but openings created by insect-caused mortality, root disease, or dwarf mistletoe will support ponderosa pine regeneration.

**4. Stands of trees are harvested according to requirements for culmination of mean annual increment of growth (16 USC 1604(m)).**

Units proposed for harvest in the Westside project area have met CMAI requirements (EA page 1-18).

**5. Construction of temporary roadways in connection with timber contracts, and other permits or leases: Unless the necessity for a permanent road is set forth in the forest development road system plan, any road constructed on land of the National Forest System in connection with a timber contract or other permit or lease shall be designed with the goal of reestablishing vegetative cover on the roadway and areas where the vegetative cover has been disturbed by the construction of the road, within ten years after the termination of the contract, permit, or lease either through artificial or natural means. Such action shall be taken unless it is later determined that the road is needed for use as a part of the National Forest Transportation System (16 USC 1608(b)).**

All temporary roads constructed through this project will be rehabilitated within 10 years of contract termination (EA pgs. 2-11, 3-161).

**6. Standards of roadway construction: Roads constructed on National Forest System lands shall be designed to standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources (16 USC 1608(c)).**

Permanent, system roads will be constructed for this project and designed to the appropriate standards for the intended uses, considering safety, cost of transportation, and effects on land and resources (Ch. 3 pg. 55). The minimum distance of temporary roads will be constructed to achieve harvest objectives. Temporary roads will use existing road and trail templates to the extent feasible to limit the creation of new areas of soil disturbance (EA pg2-4, Ch. 3 pgs. 50-53).

### ***Endangered Species Act***

Threatened or endangered terrestrial wildlife species, or their suitable habitat are not known to occur in the Westside project area, except a small edge of Canada lynx habitat overlaps the higher elevations. No project activities are proposed in this area (EA pg. 3-75). The wildlife biologist determined the Westside project would have *No Effect* on Canada lynx or Yellow-billed cuckoo (PF-WILD-055).

On May 24, 2016, the U. S. Fish and Wildlife Service (FWS) added wolverine as a Proposed species to their list of Threatened, Endangered, and Candidate species that may occur on the BNF. This change occurred after the date that the Westside EA was finalized, but before the Decision Notice was signed. The Forest acknowledges this status change and reviewed the Westside project analysis. A GIS analysis indicated that there are 16.5 acres of predicted wolverine habitat in the higher elevations along the western edge of the project area, but that none of this predicted habitat is within a treatment unit (PF-WILD-057). The project's wildlife biologist used the Region 1 Programmatic Biological Assessment for North American Wolverine to support a determination of *No Jeopardy* for wolverine in the Westside project (PF-WILD-058). This determination is reflected in the Determination of Effects for TES Wildlife Species (PF-WILD-055). Projects routinely conducted on

Forest Service lands are not considered to be a threat to the wolverine (PF-WILD-058). The Bitterroot National Forest does not need to consult with FWS when a determination for Proposed species is *No Jeopardy*.

No threatened or endangered plant species were found in the Westside project area (EA pg. 3-162, PF-RarePlants-001).

Bull trout (*Salvelinus confluentus*) is listed as a threatened species with critical habitat in Lost Horse Creek and the Bitterroot River. The fisheries biologist determined the Westside project May *Affect, not likely to Adversely Affect* bull trout or their critical habitat. There is a slight potential that activities in Moose Creek may create sediment that would be transferred to Lost Horse Creek and activities in Hayes and Camas Creeks may create sediment that could be carried to the Bitterroot River (PF-Fish-012). Alternative 2 design features are expected to prevent the creation and transfer of sediment into stream channels (PF-FISH-012).

### ***Clean Water Act***

Alternative 2 is consistent with Montana Impaired Waters (303(d)) programs since the proposed harvest activities require implementation of BMPs. Montana State Code (75-5-703, Annotated 2001) provision 10 c) states that “new or expanded nonpoint source activities affecting a listed water body may commence and continue provided those activities are conducted in accordance with reasonable land, soil, and water conservation practices”. Applicable soil and water conservation practices include timber sale contract clauses that control site disturbance, haul operations during wet conditions, and road surface maintenance activities (Westside Project EA, Appendix A, TSC B5.12 and C5.12, with others as applicable). Stream buffers consistent with the Bitterroot National Forest Plan, as amended by INFISH, minimize changes in temperature regimes (EA Ch. 1 pgs. 25, 26).

### ***National Historic Preservation Act***

Compliance with §106 of the National Historic Preservation Act was fulfilled under terms of 36CFR 800. A cultural resource inventory report was submitted to the Montana State Historic Preservation Office (SHPO), and SHPO concurrence on determinations of National Register eligibility and project effect on significant cultural resources was received on Dec. 24, 2015 (PF-HERITAGE-002). Consultation with the Confederated Salish and Kootenai Tribes was completed on March 5, 2015 with no tribal cultural concerns identified.

### ***Environmental Justice Executive Order 12898***

Executive Order 12898 requires fair treatment and meaningful involvement of all citizens regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This decision would not disproportionately affect any minority or low-income population. We have treated all citizens fairly and allowed meaningful involvement by every person regardless of race, color, national origin, or income (EA Ch. 1 pg. 13, 14).

### ***Pre-Decisional Administrative Review***

The HFRA provides for a pre-decisional administrative review process (objection process). The Westside Collaborative Vegetation Management project was subject to review and objection pursuant to 36 CFR 218 Subparts A and C. A draft Decision Notice and Finding of No Significant Impact (FONSI) were distributed with the Westside Collaborative Vegetation Management EA in March 2016. Eighteen objections were received but two did not have standing to object because the

objectors had not participated in earlier opportunities for public involvement. The Objection Reviewing Officer, David E. Schmid, notified the 16 objectors that their objections met the requirements of 36 CFR 218.8 and 218.9 and were accepted for consideration. The objectors were invited to meet to resolve objection-related issues pursuant to 36 CFR 218.11(a). The objection resolution meeting was held May 13, 2016.

On May 19, 2016, the Objection Reviewing Officer, David Schmid, notified the objectors that the objection review was complete (PF-OBJECTION-040, 041) and he had provided instructions to the Forest Supervisor to clarify and update information to better demonstrate compliance with law, regulation, or policy. After the Objection Reviewing Officer reviews the updated and clarifying information, the Responsible Official may sign the Westside Collaborative Vegetation Management Decision Notice. The Objection Reviewing Officer concurred with the updates June 29, 2016.

## Implementation

Implementation of the Westside Collaborative Vegetation Management project may begin during the fall of 2016. Activities will be implemented as described under Decision and Reasons for the Decision in this Decision Notice.

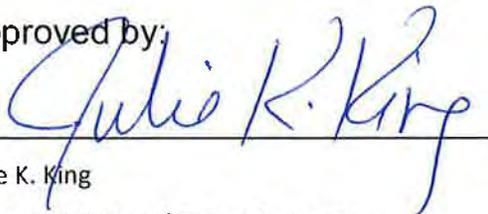
## Contact

For more information about the Westside Collaborative Vegetation Management project contact Eric Winthers, Darby District Ranger, Bitterroot National Forest, P.O. Box 388, 712 N. Main, Darby, MT 59829; by telephone (406) 821-4244; or by e-mail ([ewinthers@fs.fed.us](mailto:ewinthers@fs.fed.us)). You may also contact Julie King, Forest Supervisor, Bitterroot National Forest, 1801 N. First, Hamilton, MT., (406) 363-7121.

Information is also available at

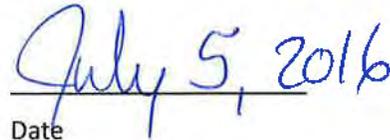
<http://www.fs.fed.us/r1/bitterroot/planning/decisiondocs/decisiondocs.html>

Approved by:



Julie K. King

Bitterroot National Forest Supervisor  
Supervisor's Office  
Bitterroot National Forest



Date

## **Appendix A: Best Management Practices Bitterroot National Forest**

Best Management Practices (BMPs) are the primary mechanism to protect beneficial uses and water quality from non-point pollution such as sediment (Environmental Protection Agency 1987). This document describes the Forest Service BMP process in detail; BMPs are chosen to fulfill specific, appropriate Soil and Water Conservation Practices (SWCP) and made part of the legally binding Timber Sale Contract (TSC). This document also includes cross-references to the Montana Department of Natural Resource Conservation BMPs (State BMPs) that each SWCP addresses, information related to implementation and planning review, and lists the contractual clauses, or *provisions*, needed to make the BMPs a legal requirement in a timber sale. This document also addresses the effectiveness of selected BMPs.

BMPs include, but are not limited to, structural and non-structural controls, operational controls, and site maintenance procedures. Many BMPs are applied during the planning phase, such as unit designs that avoid stream channels or wetlands. BMPs are applied before, during, and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters (40 CFR 130.2, EPA Water Quality Standards Regulation). Usually BMPs are applied as a system of overlapping and integrated practices rather than a single practice. BMPs are selected on the basis of site-specific conditions that reflect natural background conditions, the proposed activities and technical and economic feasibility.

The Bitterroot National Forest Plan states "Soil and Water Conservation practices will be a part of project design and implementation to ensure soil and water resource protection" (Forest Service Handbook 2509.22, Forest Plan, pg II-25). Montana State Water Quality Standards require the use of Reasonable Land, Soil, and Water Conservation Practices (analogous to BMPs) as the controlling mechanism for nonpoint source pollution. Use of BMPs is required in the Memoranda of Understanding between the Forest Service and the State of Montana as part of our responsibility as the Designated Water Quality Management Agency on National Forest System (NFS) lands.

The Practices described herein are tiered to the practices in FSH 2509.22. They were developed as part of the NEPA process, with interdisciplinary involvement, and meet Forest and State water quality objectives.

In addition to the state BMP and SWCP requirements, Forest Service activities are also controlled by the Inland Native Fish Strategy Environmental Assessment and Finding of No Significant Impact (INFISH) Forest Plan Amendment. This amendment outlines management objectives, standards and guidelines, and monitoring requirements for protecting native fish habitat in western Montana and other areas. The requirements of INFISH and how they are addressed in the project design and analysis are outlined in Chapter 2 of the Environmental Assessment (EA). For the purpose of this project, all state SMZ requirements are met or exceeded through implementation of INFISH Riparian Habitat Conservation Area (RHCA) boundaries.

### **BMP IMPLEMENTATION PROCESS**

In cooperation with the State, the USDA Forest Service primary strategy to control nonpoint sources is implementation of preventive practices (BMPs) determined necessary to protect identified beneficial uses.

The Forest Service Nonpoint Source Management System consists of:

1. BMP selection and design based on site-specific conditions; technical, economic and

- institutional feasibility; and the designated beneficial uses of the streams.
  2. BMP application before, during and after land management activities;
  3. BMP monitoring to ensure the practices are implemented and effectively protect designated beneficial uses.
  4. Evaluation of BMP monitoring results.
  5. Applying monitoring results to current/future activities and BMP design. The District Ranger is responsible for insuring that this BMP feedback loop is implemented on all projects.
1. **BMP Selection and Design.** Forest Plans identify water quality goals. These goals meet or exceed applicable legal requirements, including State water quality regulations, the Clean Water Act and the National Forest Management Act. Project environmental assessments are tiered to Forest Plans during the NEPA process.

The project interdisciplinary team selects the appropriate BMPs. After identifying the designated beneficial uses for the associated streams, the initial list of BMPs is developed from the Forest Plan standards and guidelines, Forest Service handbooks, and special provisions identified by watershed and fisheries specialists for sensitive areas.

BMP selection and design are dictated by water quality objectives, soils, topography, geology, vegetation, and climate. Environmental impacts and water quality protection options are evaluated and alternative mixes of practices are considered. A final collection of practices are selected that not only protect water quality but meet other resource needs. These final selected practices constitute the project BMPs.

2. **BMP Application.** The BMPs are translated into contract provisions or special use permit requirements. This ensures that the operator or person responsible for applying the BMP is legally required to apply it. Specialists review timber sale contracts to insure needed resource protection is included as appropriate contract provisions. Pre-sale crews and engineers take many of the site-specific BMP prescriptions from plan-to-ground during harvest unit and road layout through marking, tagging, flagging, tagline surveys, and locating road drainage and stream crossings. This is when final adjustments to fit the BMP prescriptions to the site are made before implementing the resource activity. Other BMPs are operational guidelines that are monitored by the Timber Sale Administrator (TSA).
3. **BMP Monitoring.** During the course of project activities (e.g. timber harvest or road construction), timber sale administrators, engineer representatives, and resource specialists ensure that the BMPs are implemented according to plan. BMP implementation monitoring is done before, during, and after resource activity implementation. This monitoring answers the question: Did we do what we said we were going to do? Once BMPs have been implemented, further monitoring is done to evaluate if BMPs are effective in meeting management objectives and protecting water beneficial uses. State water quality standards, including beneficial uses, are one of the evaluation criteria monitored.
4. **BMP Monitoring Evaluation.** The technical evaluation of monitoring described above determines how effectively BMPs protect or improve water quality. Water quality standards and conditions of the beneficial uses are one evaluation criteria. If the evaluation indicates that water quality standards are not met or beneficial uses are not protected, corrective action considers the following three components:
  - A. Is the BMP properly designed, technically sound, and effective? Is there a better practice, which is technically sound and feasible to implement?
  - B. Was the BMP applied as designed? What factors were involved in partial, or lack of, implementation – inadequate personnel, equipment, funds, or training?

- C. Do the parameters and criteria used for effectiveness evaluation adequately reflect changes in water quality and beneficial uses? Was the BMP effective?

5. **Feedback and Adaptive Management.** Response to BMP evaluation is both short- and long-term. Where corrective action is needed, immediate response is undertaken. Responses may include: modification of the BMP, modification of the activity, or ceasing the activity. BMP evaluations over the long-term may indicate trends that require responses or changes in management direction.

## ITEMS COMMON TO ALL SOIL AND WATER CONSERVATION PRACTICES

**Responsibility for Implementation:** The District Ranger is responsible for ensuring the factors identified in the following SWCPs are incorporated into the correct timber sale contract provision, that the provisions are included in the timber sale contract, or public works contract through the inclusion of specific contract provisions, and implemented on the ground. Specific timber sale contract provisions are included below in Table A-1 for further reference, and are listed with a "B" or a "C" followed by a number (e.g. B6.4). If the contract is a Stewardship Contract, instead of a traditional Timber Sale Contract, the provision numbers will vary. For example in the Timber Sale Contract, "C6.4# Conduct of Logging" controls logging operations. In the Stewardship Contract the exact same provision is "K-G.4# Conduct of Logging". In general, all of the provisions found in the Timber Sale Contract are also found in the Stewardship contract, under a different numbering scheme. For the purpose of this Appendix A, the provisions referred to will be from the Timber Sale Contract.

Unless otherwise specified, the Presale Forester is responsible for insuring that the factors identified in the following SWCPs are incorporated into the correct timber sale contract B or C provision and that the provisions are included in the timber sale contract.

The Timber Sale Administrator or Engineering Representative are the official representatives of the Contracting Officer (COR) on timber sale and public works contracts, respectively. They are responsible for insuring that the contract provisions are properly administered.

**Monitoring:** As part of administering the timber sale or public works contracts, the Timber Sale Administrator and Engineering Representative monitor BMP implementation. Resource Specialists also monitor SWCPs and provide feedback to the contract administrators.

## SOIL AND WATER CONSERVATION PRACTICES IN THE WESTSIDE PROJECT

### FORMAT OF THE SOIL AND WATER CONSERVATION

In this section, we list the SWCPs in a table followed by a more detailed description of their application to the Westside project. The table lists the class of SWCP, cross-references State BMPs, the timber sale contract provision that implements the SWCP, whether the SWCP applies to the project, and how the SWCP is implemented or reviewed. The following definitions assist with reviewing the table:

#### CLASSES OF SWCP (BMP)

A = Administrative

G = Ground Disturbance Reduction E = Erosion Reduction

S = Stream Channel Protection/Stream Sediment Reduction

W = Water Quality Protection ACRONYMS

SAM = Sale Area Map  
SMZ = Streamside Management Zone  
TSA = Timber Sale Administrator  
TSC = Timber Sale Contract

#### REFERENCES

- SWCP (Soil and Water Conservation Practice) number – From R1-R4 Soil and Water Conservation Practices Handbook, Forest Service Handbook 2509.22
- State BMP reference number from MTDNRC 2006 Best Management Practices for Forestry
- Applicability – does this BMP/SWCP apply to this project?
- Planning Review – how is the BMP implemented or addressed in environmental planning for this project?

The detailed description of the SWCPs applicable to the Westside project follows the format outlined below. Montana State BMPs are not referenced in the detailed descriptions.

**Title:** Includes the SWCP number and a brief title

**Objective:** Describes the SWCP objective(s) and the goals of implementation.

**Effectiveness:** Provides a qualitative assessment of expected effectiveness that the applied measure will have on preventing or reducing impacts on water quality. The SWCP is rated High, Moderate, or Low based on the following criteria:

- A. Literature/Research (must be applicable to area)
- B. Administrative studies (local or within similar ecosystem)
- C. Experience (judgment of an expert by education and/or experience)
- D. Fact (obvious by reasoned [logical] response)

**Implementation:** Identifies the range of site-specific water quality protection measures to be implemented and how the practices are expected to be applied.

Table A- 1: Soil and Water Conservation Practices – Westside Project.

Class	SWCP #	State BMP Ref.	SWCP Title	TSC Provision	Applicable? Y/N	Implementation/Planning Review
<b>Section 11 Watershed Management</b>						
A	11.01	IV.A.1	Determination of Cumulative Watershed Effects	NA	Y	Completed during project planning, refer to EA
E	11.03	III.D.10	Watershed Improvement of Roads, OHV Trails and Skid Trails	C5.419# C6.632# C6.633#	Y	See watershed improvement list for project
A	11.05	IV.A.1	Wetlands Analysis and Evaluation	B6.61 B6.62 SAM B6.62 C6.62#	Y	Stream and wetland SMZs are physically included within the larger RHCA buffer required by INFISH. Only activity improving the quality of wetlands, such as aspen enhancement, will be allowed within the wetland RHCA. No machinery will be allowed within the RHCA, except on existing roads and landings.
A	11.09	III.E.6	Management by Closure to Use	C5.41#	Y	Specifics of closures and affected roads identified in TS Contract and enforced by TSA (timber sale administrator)
W	11.13		Sanitary Guidelines for Construction of Temporary Labor, Spike, Logging, Fire Camps and Similar Installations	B6.2	Y	Applicable only if camps are established during logging operation.
<b>Section 13 Vegetation Manipulation</b>						
G	13.02	IV.A.1., 2, 4, 5 IV.B.1	Slope Limitations for Tractor Operation (14.07)	C6.4#	Y	Ground-based skidding will be restricted to slopes less than 40%, as stated in the Forest Plan. This is facilitated through cutting unit design...
G	13.03	IV.A.1 IV.B.1& 2	Tractor Operation Excluded from Wetlands, Bogs, & Wet Meadows	B6.61 B6.422 B6.62 SAM C6.62#	Y	Logging Equipment will be excluded from SMZs.
E	13.04	IV.B.6 IV.C.1	Revegetation of Surface Disturbed Areas	B6.6 C6.601# C6.633#	Y	Disturbed sites will be revegetated with a seed mix identified by Forest Botanist.

Class	SWCP #	State BMP Ref.	SWCP Title	TSC Provision	Applicable? Y/N	Implementation/Planning Review
E	13.06	IV.A.1, 4	Soil Moisture Limitations for Tractor Operations	B6.6	Y	Sale administrator will monitor soil moisture conditions, and control activity as needed to protect soils.
A	13.07		Pesticide Use Planning	NA	Y	Incorporated in project planning and design. Addresses in terms of impacts, mitigation.
W	13.08		Apply Pesticides According to Label and EPA Registration Directions	NA	Y	Mitigation and project design.
WA	13.09		Pesticide Application Monitoring and Evaluation	NA	Y	Mitigation and contract administration
A W	13.10		Pesticide Spill Contingency Planning	NA	Y	Project design and mitigation.
W	13.11		Cleaning and Disposal of Pesticide Containers and Equipment	NA	Y	Project design, mitigation, and compliance with laws, regulation and proper pesticide application.
W	13.12		Protection of Water, Wetlands, and Riparian Areas During Pesticide Spraying	NA	Y	Project design, mitigation compliance with laws, regulation and proper pesticide application.
	13.13		Controlling Pesticide Drift During Spray Application	NA	Y	Project design, mitigation compliance with laws, regulation and proper pesticide application.
<b>Section 14 Timber Harvest</b>						
A	14.02	IV.A.2-6	Timber Harvest Unit Design (14.08, 14.10)	SAM	Y	Anticipated Detrimental Soil Disturbance (DSD) has been analyzed in the EA, and cutting boundaries have been designed to avoid impacts to RHCA/SMZs. Refer to EA for mitigation and discussion on unit design.

Appendix A: Best Management Practices and Soil and Water Conservation Practices

Class	SWCP #	State BMP Ref.	SWCP Title	TSC Provision	Applicable? Y/N	Implementation/Planning Review
A	14.03	IV.A.1 – 4, 6 & B.1 - 3	Use of Sale Area Maps for Designating Soil and Water Protection Needs	B1.1 B.42 B6.5 B6.42 B6.61 B6.62 C6.4	Y	SAM will identify protected stream courses, wetlands and riparian areas, slumps and other areas excluded from harvest
A	14.04	IV.A.1	Limiting the Operating Period of Timber Sale Activities	B6.65 B6.6 B6.31 B6.311 B6.312 C6.316#	Y	Normal operating seasons will be identified in the TSC. TSA will monitor conditions and enforce as needed.
A	14.05	IV.A.1	Protection of Unstable Areas	C6.4#	N	No unstable (mass-movement-prone) areas located during planning or fieldwork
A	14.06	II. (all) III.D.10	Streamside Management Zone Rules, Riparian Area Designation	B6.5 B1.1 C6.50#	Y	SMZ's are typically more narrow than RHCA's that will be marked and excluded from harvest.
G	14.07	IV.A.2& 4	Determining Tractor Loggable Ground	B1.1 B6.42	Y	Initially determined during project planning in IDT discussions. Will be field checked during cutting unit layout. Refer to mitigation, Soils and Watershed reports as well as SWCPs 13.02, 13.03, 14.02, 14.03, 14.05, 14.06.
E	14.08	IV.A.2,4, 5	Tractor Skidding Design	B6.422 C6.4#	Y	Unit Table lists units appropriate for ground based yarding.
E	14.09	IV.A.1, 2	Suspended log Yarding in Timber Harvesting	B6.42 C6.4#	Y	BMP describes requirements for suspended (cable, helicopter) yarding. Applicable to all non-tractor units, determined by field review during planning stages.
A	14.10	IV.A.6, B.4	Log Landing Location and Design	B6.422 C6.422	Y	Potential landings have been identified and reviewed on the ground for accessibility. Landings locations will be selected that require the least amount of excavation and have the least potential for erosion. Locations are agreed upon by the purchaser and Forest Service. Mitigation describes treatment after use.

Appendix A: Best Management Practices and Soil and Water Conservation Practices

Class	SWCP #	State BMP Ref.	SWCP Title	TSC Provision	Applicable? Y/N	Implementation/Planning Review
E	14.11	IV.B.4	Log Landing Erosion Prevention and Control	B6.6 B6.311 B6.64 C6.6 C6.601#	Y	BMP describes design of landings and post- use treatment to minimize erosion
E	14.12	IV.B.5&6	Erosion Prevention and Control Measures During Timber Sale Operations	B6.6 B6.64 B6.311 C6.4 C6.6 C6.601#	Y	Erosion control revegetation will occur in a manner approved by the forest botanist.
E	14.15	IV.B.1,5 &6, IV.A.5	Erosion Control on Skid Trails	B6.6 B6.311 B6.65 B6.66 C6.4 C6.6 C6.601#	Y	Water bar spacing identified in BMP, limit summer skidding based on soil moisture to reduce compaction and displacement.
E	14.16	IV.A.1&5	Meadow Protection During Timber Harvesting	B1.1 B5.1 B6.422 B6.61 C6.4# C6.66	Y	Equipment will be prohibited from entering meadows.
S	14.17	IV.A.1&5	Stream course Protection (Implementation and Enforcement)	B1.1 B6.5 B6.6 C6.50# C6.6	Y	Stream courses will be identified on SAM, excluded from equipment entry (SMZ and INFISH), and excluded from treatment area Unless otherwise identified in the EA, Ground based heavy equipment will be prohibited from entering SMZ and RHCAs.
E	14.18	III.E.2, 8, IV.A.5, IV.B.4, 6	Erosion Control Structure Maintenance	B6.67	Y	TSC requires maintenance of erosion control structured by purchaser and is monitored by TSA
A	14.19	III.E.7, IV.A.5, B.4, 5, 6	Acceptance of Timber Sale Erosion Control Measures Before Sale Closure	B6.36	Y	Direction according to TSC and certification by TSA required prior to sale closing.
E	14.20	IV.C (all)	Slash Treatment in Sensitive Areas	SAM B6.5 C6.50# B6.7 C6.7 C6.71 C6.753	Y	Mechanized equipment will not be allowed to operate in Sensitive Areas as described in SWCP 14.20.
A	14.22		Modification of the Timber Sale Contract	B2.37 B8.3	Y	Within TSC provision to modify contract for resource reasons.
A	14.23	IV.C.1	Reforestation Requirement	internal	N	No reforestation needs identified.

Class	SWCP #	State BMP Ref.	SWCP Title	TSC Provision	Applicable? Y/N	Implementation/Planning Review
G	NA	IV.C.3,4,6	On-site Large Woody Residue and Soil Litter Retention	C6.7# C6.406#	Y	Silvicultural prescriptions specify the amount of woody materials to be left on site following treatments and is displayed in mitigation table. Soil scientist involved in final recommendations.
G	NA	VI. (all)	Winter Logging	C6.4#	Y	Purchaser may work in qualifying winter conditions at their discretion. See mitigations in EA for details.
<b>Section 15 – Roads and Trails</b>						
S	15.02	III.A,B,C III.D.5, IV.A.5	General Guidelines for the Location and Design of Roads and Trails	B5.2	Y	Applies to any road design and location on the project area. A 124 state permit is required for any stream channel modification.
E	15.03	III.C.1, 7	Road and Trail Erosion Control Plan	B6.31, B6.5, B6.6, C5.31#, C6.6, C6.601#, C6.632#, C6.633#	Y	Seeding and fertilizing of disturbed sites would occur, effectiveness monitoring would determine if reseeding is necessary. Maintenance of haul routes would occur as directed by TSA and TSC. Refer to mitigations in EA.
E	15.04	III.D.4 III.E.4,7	Timing of Construction Activities	B6.31 B6.311	Y	TSA will monitor conditions and restrict when needed to prevent adverse results.
E	15.06	III.D.7, III.E.2	Mitigation of Surface Erosion and Stabilization of Slopes	C6.601#	Y	Seeding and fertilizing of disturbed sites would occur, effectiveness monitoring would determine if reseeding is necessary. Erosion control needs determined by TSC and TSA. Refer to mitigations in EA.
E	15.07	III.C.1,5 III.D.2, III.E.2	Control of Permanent Road Drainage	B/C6.6 B6.65 C6.601 C5.31# C6.661	Y	Standard road maintenance and BMP work will be covered under C5.31#.
E	15.08	III.D.1	Pioneer Road Construction	B5.2, B6.5, B6.6, B6.62, C5.1, C5.23#, C6.6, C6.62#	Y	A 124 state permit is required for any stream channel work.
E	15.09	III.D.2 III.E.7	Timely Erosion Control Measures on Incomplete Road and Stream crossing Projects	B6.6 B6.66 C6.6 C5.23#	Y	As directed by TSA and TSC

Appendix A: Best Management Practices and Soil and Water Conservation Practices

Class	SWCP #	State BMP Ref.	SWCP Title	TSC Provision	Applicable? Y/N	Implementation/Planning Review
E	15.10	III.D.3,8	Control of Road Construction Excavation & Side cast Material	B5.2, B5.21,	Y	Controlled through TSC and engineering representative (ER).
S	15.11	VII.A. (all)	Servicing and Refueling of Equipment	B6.34 B6.341 B6.342	Y	Servicing of equipment will be excluded from RHCA/ SMZs.
S	15.12	III.A.5 IV.B.1	Control of Construction in Riparian Areas	B6.5 B6.61, C6.51, and C6.52. 124 permit	Y	124 state permit required for stream channel modification.
S	15.13	III.E.5	Controlling In-Channel Excavation	C6.36, C6.52, and B6.5	Y	State 124 permit required.
S	15.14	IV.A.(all) V.C.5	Diversion of Flows Around Construction Sites	B6.5	Y	State 124 permit required.
S	15.15	IV.A.(all) V.B.2, V.C.4	Stream crossings on Temporary Roads	B5.1 B6.5 C5.1	Y	This BMP would cover temporary road construction stream crossings. No temporary roads planned in RHCA's
S	15.16	IV.A.(all) V.C.(all)	Bridge and Culvert Installation (Disposition of Surplus Material and Protection of Fisheries)	B5.21, B6.5	Y	Culvert and bridge implementation planned, Camas Creek and tributary.
E	15.18	III.D.6,8	Disposal of Right-of-Way and Roadside Debris	B5.21, B6.5	Y	Appropriate mitigation for temporary road construction, and pre-haul maintenance.
E	15.21	III.D.1 III.E.1,2	Maintenance of Roads	C5.12 C5.31# C5.316# C5.314# C5.312# C5.41	Y	Road maintenance plan identified in TSC.
E	15.22	III.D.7	Road Surface Treatment to Prevent Loss of Materials	C5.31# (T-103) C5.314#	Y	As directed by TSC.
E	15.23	III.D.6 IV.B.1	Traffic Control During Wet Periods	B5.12, and C5.12	Y	As directed by TSA.

Class	SWCP #	State BMP Ref.	SWCP Title	TSC Provision	Applicable? Y/N	Implementation/Planning Review
E	15.24	III.E.3,4 VI.B.2	Snow Removal Controls	C5.316#	Y	Refer to TSC, monitored by TSA.
E	15.25	III.E.8	Obliteration of Temporary Roads	C6.632#	Y	Refer to TSC, monitored by TSA. Required for all temporary roads.
<b>Section 18 Fire Suppression and Fuels Management</b>						
A	18.02	IV.C.2	Formulation of Fire Prescriptions	NA	Y	Rx have been developed in IDT setting with specialist input and consideration of habitat type, existing vegetation, fuel loadings and position on landscape.
E	18.03	IV.C.8	Protection of Soil & Water from Prescribed Burning Effects	NA	Y	Burning should only occur during Rx window to meet prescribed fire intentions. See soil mitigations in EA.
E	18.04	None	Minimizing Watershed Impacts from Fire Suppression Efforts	NA	Y	Should a prescribed fire escape, resource advisor would advise suppression team of sensitive areas and resource concerns.
E	18.05	None	Stabilization of Fire Suppression Related Watershed Damage	NA	Y	This practice would be applied in the event a prescribed fire escaped containment. A resource advisor would inform the fire suppression team of sensitive areas and resource concerns.

## **SWCPS DESCRIPTIONS**

### **PRACTICE 11.07 - OIL AND HAZARDOUS SUBSTANCE SPILL CONTINGENCY**

### **PRACTICE 15.11 - SERVICING AND REFUELING OF EQUIPMENT**

**OBJECTIVE:** To minimize contamination of waters from accidental spills of fuels, lubricants, bitumen, raw sewage, wash water, and other harmful materials by prior planning and development of Spill Prevention Control and Countermeasure Plans.

**EFFECTIVENESS:** High based on reason, logic response, and observation.

**IMPLEMENTATION:** The Contracting Officer, Engineering Representative, or Timber Sale Administrator would designate the location, size, and allowable uses of service and refueling areas. They would also be aware of procedures to follow in case of a hazardous spill, as outlined in the Forest Hazardous Substance Spill Contingency Plan (SWCP 11.07). Contract provisions CT6.34 Sanitation and Servicing and BT6.341 Prevention of Oil Spills are included in all timber sale contracts. BT6.341 requires the purchaser to prepare a spill prevention control and countermeasure plan, which shall meet applicable EPA requirements, including certification by a registered professional engineer. This requirement is implemented when the total oil or oil products storage exceeds 1,320 gallons, or when any single container exceeds 660 gallons.

### **PRACTICE 13.02 - SLOPE LIMITATIONS FOR TRACTOR OPERATION**

### **PRACTICE 13.06 - SOIL MOISTURE LIMITATIONS FOR TRACTOR**

### **OPERATION PRACTICE 14.02 – TIMBER HARVEST UNIT DESIGN**

### **PRACTICE 14.07 – DETERMINING TRACTOR LOGGABLE GROUND**

### **PRACTICE 14.08 – TRACTOR SKIDDING DESIGN**

**OBJECTIVE:** To insure that timber harvest unit design would secure favorable conditions of water flow, maintain water quality and soil productivity, and reduce soil erosion and sedimentation during and following thinning and fuel reduction.

**EXPLANATION:** The recommendations in these practices are based on soil conditions and slope, which relate to erosion hazard. The objective of these practices is to minimize erosion by limiting tractor yarding to appropriate terrain and soils, and by designing skidding patterns to best fit the terrain. General slope limitations for tractor logging are 35% standard and 20% adverse (uphill).

All tractor units would be logged using designated skid trails. Equipment would occasionally leave the trails to access trees or accomplish other activities.

Logging may occur in either winter or summer (subject to applicable timing restrictions required for other resources, such as wildlife). The goal is to occupy less than 15 percent of the harvest area, which includes soil disturbance from skid trails, temporary roads, and landings associated with either past activities or proposed activities.

All of the proposed units either have less than 15 percent existing detrimental soil disturbance, or would after post-logging treatments are implemented (e.g., subsoiling). Most of the existing soil disturbance is from old skid trails or roads, some of which can be reused.

All existing roads and skid trails would be reused to the extent feasible unless doing so would adversely affect soil, water, or other resources. If roads or trails cannot be reused, their extent must be considered when laying out additional skid trails.

To the extent possible, logging in summer would occur when the soils are drier than field capacity nearing the permanent wilting point, as determined by the hand feel method and observations of grasses and forbs, or other agreed-upon method.

Winter logging requires a combination of soil frost and snow depth sufficient to protect the soil from detrimental disturbance

Timber Sale Administrators will monitor soil moisture conditions prior to allowing equipment to begin operations in summer and monitor snow and temperature conditions prior to winter logging. This monitoring must be documented in the Timber Sale reports.

All burn units would be ignited when burning conditions meet the prescription and would maintain soil quality within an acceptable range.

If monitoring after project implementation indicates that detrimental soil disturbances for a given treatment unit exceed or equal 15 percent, then all or a portion of the following actions will be used to begin the restoration of soil quality. Restoration would occur on sites with a high amount of detrimentally disturbed ground such as designated skid trails and landings:

- Scarify heavily used skid trails and landings with the teeth on an excavator bucket to a depth of 2 to 4 inches. Subsoiling with a grapple rake (SGR) or excavator bucket (SEB) may be necessary if it is determined that subsurface compaction is root limiting. In these cases, the subsoiling would decompact the skid trail to the appropriate depth to allow for productive vegetative growth.
- Plant Montana-certified weed free native grasses on the scarified soils as recommended by the Forest Botanist.
- Plant native shrubs where needed to augment natural vegetation and scarification.

The site condition will be used to determine which of the above mitigations would be used. These mitigations do not result in instant restoration of detrimentally disturbed soils; rather they begin the restoration process.

All temporary roads (constructed and re-used existing templates) will be reclaimed after use, as soon as logistically practicable. The reclaiming of temporary roads will include removing any installed culverts or temporary bridges, re-contouring the entire road template to natural ground contour, and, to the extent feasible, placing the top soil back on the soil surface. Decompaction of the road bed will be completed on existing templates where topsoil materials are no longer available. Woody material should be placed on the recontoured and decompact road as available. The road reclamation will be completed with fertilization and seeding as specified by the Soil Scientist and Forest Botanist.

**EFFECTIVENESS:** High - Experience of Bitterroot NF Soil Scientist and Botanist; based on reason, logic and observation.

**IMPLEMENTATION:** The following features would be designated on the Timber Sale Area Map:

Project Specific BMPs would be implemented primarily with the use of timber sale contract provision CT6.4, or other appropriate contract provisions.

**PRACTICE 14.03 - USE OF SALE AREA MAPS FOR DESIGNATING SOIL AND WATER PROTECTION NEEDS**

**PRACTICE 14.16 – MEADOW PROTECTION DURING TIMBER HARVESTING**

**PRACTICE 14.17 STREAM COURSE PROTECTION (IMPLEMENTATION & ENFORCEMENT)**

**OBJECTIVE:** To delineate the location of protection and special treatment areas and ensure their recognition, proper consideration, and protection during project activities.

**EFFECTIVENESS:** High; the hydrologist, fisheries biologist, and soil scientist review the timber sale area map; based on reason, logic, and observation.

**IMPLEMENTATION:** The following features would be designated on the Timber Sale Area Map:

Stream courses (perennial and intermittent) to be protected under contract provision BT6.5  
Special treatment zones (STZS) as needed as per contract provision CT6.62 (site-specific wetland protection measures).

#### **PRACTICE: 14.06 - RIPARIAN AREA DESIGNATION**

**OBJECTIVE:** To minimize the adverse effects on Riparian Areas from adjacent logging and related land disturbance activities.

**EFFECTIVENESS:** High; local monitoring, and experience of the soil scientist, hydrologist, sale administrator and interdisciplinary team (ID Team) are that these requirements and criteria are highly effective in minimizing soil erosion.

**IMPLEMENTATION:** The Riparian Area requirements are identified during the environmental analysis by the ID Team. The timber sale project is designed to include site specific recommendations for the prevention of sedimentation and other stream damage from logging activities. The environmental analysis will provide for planning of harvests to insure long-term health and revegetation of the Riparian Areas, while meeting shading, debris recruitment, and other management objectives. As appropriate, monitoring and evaluation will be identified in the environmental analysis documentation. The Presale Forester is responsible for the inclusion of the Riparian Areas in the Timber Sale Contract and on the Sale Area Map.

The certified Sale Administrator is responsible for contract compliance during harvest operations. Riparian area widths are determined by INFISH criteria and exceed MT DNRC requirements.

#### **PRACTICE 14.09 – SUSPENDED LOG YARDING, LANDING LOCATION AND DESIGN**

**OBJECTIVE:** To protect the soil from excessive disturbance and accelerated erosion and to maintain the integrity of the Riparian Area and other sensitive watershed areas.

**EFFECTIVENESS:** High; Local monitoring, and experience of the soil scientist, hydrologist, sale administrator, and ID Team members indicate these requirements and criteria are highly effective in minimizing soil erosion.

**IMPLEMENTATION:** During the environmental analysis, the ID Team identifies areas where suspended log yarding is needed. The specific systems are included in the contract and designated on the Sale Area Map by the Presale Forester. The Timber Sale Administrator oversees the project operation using the guidelines and standards established in the timber sale contract with reference to the environmental analysis documentation.

Suspended log yarding includes all yarding systems in which logs are partially or wholly suspended off of the ground. These systems include high-lead, skyline, helicopter, and balloon yarders. The systems are used on steep or unstable slopes and in Riparian Areas where tractors cannot operate. All of these systems cause less soil disturbance because there is less contact between the soil and heavy machinery. In most cases, these systems require fewer roads because they have a longer “reach”. Fewer roads and less soil disturbance causes less soil and water resource impacts.

#### **PRACTICE 14.10 - LOG LANDING LOCATION AND DESIGN**

#### **PRACTICE 14.11 - LOG LANDING EROSION PREVENTION AND CONTROL**

#### **PRACTICE 14.12 - EROSION PREVENTION AND CONTROL MEASURES DURING TIMBER SALE OPERATIONS**

#### **PRACTICE 14.15 - EROSION CONTROL ON SKID TRAILS**

**OBJECTIVE:** To protect water quality by minimizing erosion and subsequent sedimentation derived from log landings and skid trails.

**EFFECTIVENESS:** High; experience of the soil scientist, hydrologist, sale administrator, and ID Team indicate that these requirements and criteria are highly effective in minimizing soil erosion).

**IMPLEMENTATION:** Standard Timber Sale provision BT6.6 requires the purchaser to conduct operations in a reasonable fashion to minimize erosion. Additionally, specific erosion requirements would be spelled out in provisions such as CT6.4, CT6.6, CT6.601, CT6.62, and CT6.623. Project-specific BMPs would be implemented primarily through timber sale contract provision CT6.4, or other appropriate contract provisions.

The following criteria would be used to control or minimize erosion from landings and skid trails:

1. Landings:

- Maintain landings during periods of use in a manner that prevents debris and sediment from entering any streams.
- Landings would drain in a direction and manner that would minimize erosion and preclude sediment delivery to any stream.
- Standard timber sale contract provision B6.64 Landings requires that after landings have served the Purchaser's purpose, the Purchaser shall ditch or slope them to allow water to drain or spread.
- Landings would be seeded as needed with a mix approved by the Forest Botanist.

2. Skid Trails:

- Skid trails would be water-barred as needed; the Timber Sale Administrator would designate the trail location and spacing (SWCP 15.25).
- Skid trails likely to produce sediment would be covered with slash and/or seeded with a mix of seed and fertilizer specified in CT6.601

### **PRACTICE 14.18 - EROSION CONTROL STRUCTURE MAINTENANCE**

**OBJECTIVE:** To ensure that constructed erosion control structures are stabilized and working effectively.

**EFFECTIVENESS:** High; experience of the soil scientist, sale administrator, and ID Team members is that the following requirement is highly effective in minimizing soil erosion.

**IMPLEMENTATION:** Timber Sale Contract provision, BT6.66, requires that during the period of the contract, the Purchaser shall provide maintenance of soil erosion control structures constructed by the Purchaser until they stabilize. The Forest Service may agree to perform such structure maintenance under BT4.228 Cooperative Deposits, if requested by the Purchaser, subject to agreement on rates. Should the Purchaser fail to do seasonal maintenance work, the Forest Service may assume the responsibility and charge the Purchaser accordingly. The Timber Sale Administrator would ensure that erosion control structures are working effectively.

### **PRACTICE 14.19 - ACCEPTANCE OF TIMBER SALE EROSION CONTROL MEASURES BEFORE SALE CLOSURE**

**OBJECTIVE:** To assure the adequacy of required erosion control work on timber sales.

**EFFECTIVENESS:** High; reasoned, logical response or observation.

**IMPLEMENTATION:** Timber Sale Contract provision BT6.36, requires that upon the Purchaser's

written request and assurance that contract work has been completed; the Forest Service shall perform an acceptance inspection. For erosion control work, "acceptable" means only minor deviation from established standards, provided no major or lasting impact is caused to soil and water resources. The Timber Sale Administrator would not accept as complete, any erosion control work that does not meet this criteria.

### **PRACTICE 15.02 - GENERAL GUIDELINES FOR THE LOCATION AND DESIGN OF ROADS AND TRAILS**

**OBJECTIVE:** To locate and design roads and trails with minimal soil and water resource impact while considering all design criteria.

**EXPLANATION:** Several considerations must be incorporated into the location and design of roads and trails. These factors directly affect protection of water quality, soil, and other resource values. The following coordination instructions apply to all transportation activities:

- A. Area Transportation Analysis and project planning will be completed using an interdisciplinary process, and the appropriate NEPA document will be prepared and tiered to the Forest Plan. Area Transportation analysis is an extremely effective tool to reduce overall road mileages and minimize potential resource impacts.
- B. Location, design, and construction activities shall utilize appropriate technical resource staffs, when needed, to evaluate effects of transportation development and operations, and recommend mitigating measures to minimize adverse impacts.
- C. Roads and trails will be located and designed to facilitate completion of the transportation system, serve specific resource management needs, fit the terrain, and minimize damage to improvements and resources. Fragile, unstable, sensitive, or special areas should be avoided.
- D. Roads and trails should be designed based on traffic and safety requirements of anticipated use and to meet the overall transportation plan. The design shall incorporate features to prevent or minimize soil movement and sedimentation as well as undue disruption of water flow.
- E. Stream crossing structures shall be designed to provide the most efficient drainage facility consistent with resource protections, importance of the road, legal obligations, and total costs. The design may involve a hydrologic analysis to determine runoff rates and volumes, flood conditions, velocities, scour, open channel shapes, approach topography, materials-foundation condition, and fish passage, as required. An economic comparison of various flood frequencies versus structure sizes and types is also considered.
- F. Locate and design roads and trails to drain naturally by appropriate use of out-sloping or in-sloping with cross drainage and grade changes, where possible. Relief culverts and roadside ditches will be designed whenever reliance upon natural drainage would not protect the running surface, excavation, or embankment. Road and trail drainage should be channeled to effective buffer areas to maximize sediment deposition prior to entry into live water.

**EFFECTIVENESS:** High for new permanent or temporary roads; reasoned, logical response, or observation.

**IMPLEMENTATION:** During the environmental analysis, the ID team ensured that management needs, objectives, requirements, and controls are incorporated in the location and design of roads and trails. Mitigation measures needed to protect soil and water resources were identified in the NEPA process. Contract provisions will be prepared that meet the soil and water resource protection requirements.

### **PRACTICE 15.03 - ROAD AND TRAIL EROSION CONTROL PLAN**

**OBJECTIVE:** To prevent, limit, and mitigate erosion, sedimentation, and resulting water quality degradation prior to the initiation of construction and maintenance activities through effective contract administration during construction and timely implementation of erosion control practices.

**EXPLANATION:** Land disturbing activities usually result in at least short-term erosion. Poorly designed, located, constructed, and maintained roads and trails are usually responsible for the majority of stream sedimentation problems associated with forest management practices. By effectively planning for erosion control, sedimentation can be minimized.

Roads and trails require a variety of erosion control measures. Many erosion control practices not only protect water quality but also maintain road prism integrity, reduce maintenance costs, and improve traffic characteristics. The location of the road or trail with respect to streams, beneficial uses of that water, soil, and geologic information and other site factors govern the degree of stabilization required. Stabilization usually includes a combination of practices that promotes the re-establishment of vegetation on exposed slopes, provides physical protection to exposed surfaces, prevents the downslope movement of soil, or controls road drainage.

Since a newly constructed road is most susceptible to erosion from seasonal precipitation, the timing of erosion control practices is of primary concern. Those practices that can be accomplished concurrent with road construction shall be favored as a means of immediate protection of the water resource

**EFFECTIVENESS:** Moderate – High; reason, logical response, and observation).

**IMPLEMENTATION:** Erosion control objectives and detailed mitigation measures are developed using an interdisciplinary approach during the environmental analysis. The contract specifications and provisions for the road or trail shall reflect these measures and objectives. When standard specifications do not provide the degree of mitigation required, the ID team will develop special project specifications.

Prior to the start of construction, the Purchaser shall submit a schedule for proposed erosion control work as required in the timber sale contract standard specifications. The schedule shall include all erosion control items identified in the specifications. The schedule shall consider erosion control work necessary for all phases of the project. The Purchaser's construction schedule and plan of operation will be reviewed in conjunction with the erosion control plan to insure their compatibility before any schedules are approved. No work will be permitted on the project until the Contracting Officer has approved all schedules.

The Contracting Officer or Engineering Representative shall ensure that erosion control measures are implemented according to the approved schedule and are completed in an acceptable fashion. Field reviews and on-site inspection by the Line Officer and/or Forest Engineer will identify any additional erosion control measures required to protect the streams that were not recognized during planning or design. Necessary correction measures shall be implemented immediately through normal administrative channels.

The following items may be considered as erosion control measures when constructed in a timely manner. To maximize effectiveness, erosion control measures must be in place and functional prior to seasonal precipitation or runoff.

- A. **Measures to reestablish vegetation on exposed soils:** This is usually accomplished by seeding suitable grass and legume species in conjunction with mulching and fertilization. In some situations, treatments may include tree seedling

- planting or sprigging of other woody species.
- B. **Measures which physically protect the soil surface from detachment or modify the topography to minimize erosion:** These treatments may include the use of dust oil or gravel on the road travelway and ditches and the use of mulches, riprap, erosion mats, and terracing on cuts, fills, and ditches. Temporary waterbars on unfinished roads and trails can effectively reduce sedimentation.
  - C. **Measures which physically inhibit the downslope movement of sediments to streams:** These measures may include the use of slash filter windrows on or below the fill slopes, baled straw in ditches or below fill slopes, catch basins at culvert inlets, and sediment basin slash filter windrows may be utilized in live water drainages where fish passage is not required and where peak flows are low.
  - D. **Measures that reduce the amount of soil disturbance in or near streams:** These measures may include dewatering culvert installation or other construction sites, and immediate placement of permanent culverts during road pioneering. Temporary pipes should not be allowed unless positive control of sedimentation can be accomplished during installation, use, and removal.
  - E. **Measures that control the concentration and flow of surface and subsurface water:** These may include insloping, outsloping, ditches, cross drains, under drains, trenches, and so forth.

**PRACTICE 15.06 - MITIGATION OF SURFACE EROSION AND STABILIZATION OF SLOPES PRACTICE 13.04 - REVEGETATION OF SURFACE DISTURBED AREAS**

**OBJECTIVE:** To protect soil productivity and water quality at culvert removal and culvert upgrade sites by minimizing soil erosion.

**EXPLANATION:** This practice is used to stabilize disturbed area surfaces with vegetation. The type of vegetation to use is determined by evaluating soil fertility and water holding capacity, slope, aspect, landtype characteristics, climate, vegetation species characteristics, and project objectives. Based on field observations and interpretations, the ID Team selects the type of vegetation that meets many or most of the management objectives for the area; range, wildlife, timber, fuels, minerals, and aesthetics. Grass or browse species (shrubs) may be seeded or planted between recently planted trees for erosion prevention, wildlife habitat enhancement, or other management needs.

**EFFECTIVENESS:** Moderate; reason, logical response, and observation

**IMPLEMENTATION:** The identification of disturbed areas and vegetation species mix are determined during the NEPA process. The responsible Line Officer assigns specific individuals to execute the project. Projects are subsequently monitored to assess the revegetation effectiveness, and need for follow-up action.

**PRACTICE 13.07 – PESTICIDE USE PLANNING**

**PRACTICE 13.08 – APPLY PESTICIDES ACCORDING TO LABEL AND EPA REGISTRATION DIRECTIONS**

**PRACTICE 13.09 – PESTICIDE APPLICATION MONITORING AND EVALUATION PRACTICE 13.10 – PESTICIDE SPILL CONTINGENCY PLANNING**

**PRACTICE 13.11 – CLEANING AND DISPOSAL OF PESTICIDE CONTAINERS AND EQUIPMENT**

**PRACTICE 13.12 – PROTECTION OF WATER, WETLANDS, AND RIPARIAN AREAS DURING PESTICIDE SPRAYING**

**PRACTICE 13.13 – CONTROLLING PESTICIDE DRIFT DURING SPRAY APPLICATION**

**PRACTICE: 13.07 – PESTICIDE USE PLANNING**

**OBJECTIVE:** To incorporate water quality and hydrologic considerations into the Pesticide Use Planning Process.

**EXPLANATION:** The pesticide use planning process will be used to identify problem areas and the objectives of the project, establish the administrative controls, identify treatments and preventive measures, and incorporate the hydrologic considerations contained in SWCP 13.08 through 13.13. The NEPA process addresses these considerations in terms of impacts, mitigation measures, and alternative treatment measures. Project work and safety plans specify management direction.

Factors considered in pesticide selection are: purpose of the project, application methods available, target species, timing of treatment, pest location, size of treatment area, and need for repeated treatment.

Practicability of application considers: registration restrictions, form and method of application, topographic relief and areas to be avoided, and social acceptance of the project. The degree of risk considers: hazard to humans, method of application, transportation and handling hazards, carriers needed, and chemical persistence.

**EFFECTIVENESS:** High; reason, logical response, and observation

**IMPLEMENTATION:** The interdisciplinary team evaluates the project in terms of potential site response, potential social and environmental impacts, mitigating measures needed to protect water quality, and the need and intensity of monitoring and evaluation. The responsible Line Officer then prepares the necessary NEPA documentation, Project Plan and Safety Plan. Depending on the pesticide use, (FSM 2151.04) the Forest pesticide-use coordinator or Integrated Pest Management Working Group or regional IP-MWG reviews the documents along with the Pesticide-use Proposal, form FS-2100-2, and makes recommendations for or against approval of the project.

**REFERENCES:** NFMA; NEPA; FSM 2150 and 2323; State Hazardous Waste Management Plans; see references in “Best Management Practices” Definition 05—2 and 3.

### **PRACTICE 13.08 – APPLY PESTICIDES ACCORDING TO LABEL AND EPA REGISTRATION DIRECTIONS**

**OBJECTIVE:** To avoid water contamination by complying with all label instructions and restrictions.

**EXPLANATION:** Label directions for each pesticide are detailed and specific, and include legal requirements to use.

**EFFECTIVENESS:** High; reason and logical response.

**IMPLEMENTATION:** Constraints identified on the label and other legal requirements of application are incorporated into project plans and contracts. Responsibility for ensuring that label directions and other applicable requirement are followed rests with the Forest Supervisor or designate such as the Forest Pesticide Use Coordinator. For contracted projects, it is the responsibility of the Contracting Officer to ensure that label directions and all other requirements are followed.

**REFERENCES:** FSM 2150; Best Management Practice Definition (05—2 and 3).

### **PRACTICE 13.09 – PESTICIDE APPLICATION MONITORING AND EVALUATION**

**OBJECTIVE:** To determine and document that pesticides have been applied safely and to provide an early warning for any contamination of water or non-target areas or resources.

**EXPLANATION:** This practice provides feedback on the placement accuracy, application amount, and any water contamination that might occur from pesticide use to minimize or eliminate hazards to non-target areas or resources. Monitoring and evaluation methods include spray cards, dye

tracing, and direct measurement of pesticide in or near water. Type of pesticide, equipment, application difficulty, public concern, beneficial uses, monitoring difficulty, availability of competent laboratory analysis and applicable federal, State, and local laws and regulations are factors considered when determining the monitoring and evaluation needs.

**EFFECTIVENESS:** High; reasoned and logical response.

**IMPLEMENTATION:** The monitoring and evaluation of pesticide application is a component of SWCP 11.02. The need for a monitoring plan is identified during the Pesticide Use Planning Process/NEPA process. If determined necessary, this monitoring and evaluation plan will consider the same items as in SWCP 11.02. A technical staff familiar in pesticide monitoring will evaluate and interpret the monitoring results in terms of compliance, State water quality standards, and adequacy of project specifications.

**REFERENCES:** FSM 2150; Best Management Practice Definition (05—2 and 3).

### **PRACTICE 13.10 – PESTICIDE SPILL CONTINGENCY PLANNING**

**OBJECTIVE:** To reduce contamination of water from accidental pesticide spills.

**EXPLANATION:** A contingency plan that contains a predetermined organization and immediate actions to be implemented in the event of a hazardous substance spill will be prepared. The plan lists notification requirements, time requirements for notification, how spill will be handled, and who will be responsible for clean-up. Factors considered for each spill are: specific substance spilled, quantity, toxicity, proximity of spill to waters, and the hazard to life, property, and the environment.

**EFFECTIVENESS:** High; reasoned, logical response, and observation.

**IMPLEMENTATION:** The Pesticide Spill Contingency Plan will be incorporated into the Project Safety Plan. The NEPA process will provide the means for including public and other agency involvement in plan preparation. The plan will list the responsible authorities.

**REFERENCES:** SWCP 11.07; Pesticide Storage, Transportation, Spills, and Disposal Handbook (FSH 2109.12); FSM 6740, 7442, 7443, and 7460; Oil and Hazardous Substances Pollution contingency Plan for EPA Region 8 and 10, 7/26/85; R1 and R4 Emergency and Disaster Plan; Best Management Practice Definition (05—2 and 3).

### **PRACTICE 13.11 – CLEANING AND DISPOSAL OF PESTICIDE CONTAINERS AND EQUIPMENT**

**OBJECTIVE:** To prevent water contamination and risk to humans from cleaning and disposal of pesticide containers.

**EXPLANATION:** The cleaning and disposal of pesticide containers and equipment must be done in accordance with Federal, State, and local laws, regulations, and directives, and in a manner which will safeguard public health, the beneficial uses of water, aquatic organisms, and wildlife. Containers are rinsed three times, the rinse water applied on the project area as soon as practical, and the containers taken to the designated disposal site. Application equipment is also rinsed and rinse water applied to the project site before the equipment is moved from the project area.

**EFFECTIVENESS:** Moderate; reason, logical response, and observation

**IMPLEMENTATION:** The Forest or District Pesticide Use Coordinator will locate proper rinsing and disposal sites, and will arrange for container disposal in an approved disposal site when pesticide is applied by Forest Service personnel. When the pesticide is applied by a contractor, the contractor is responsible for proper clean-up and container disposal in accordance with label directions and

Federal, State, and local laws.

**REFERENCES:** SWCP 11.07; Pesticide Storage, Transportation, Spills, and Disposal Handbook (FSH 2109.12); FSM 6740, 7442, 7443, and 7460; Oil and Hazardous Substances Pollution contingency Plan for EPA Region 8 and 10, 7/26/85; R1 and R4 Emergency and Disaster Plan; Best Management Practice Definition (05—2 and 3).

### **PRACTICE 13.12 – PROTECTION OF WATER, WETLANDS, AND RIPARIAN AREAS DURING PESTICIDE SPRAYING**

**OBJECTIVE:** To minimize the risk of a pesticide entering surface or subsurface waters or affecting riparian areas, wetlands, or other non-target areas.

**EXPLANATION:** When applying pesticides, an untreated buffer strip will be left alongside surface waters, wetlands, and riparian areas. Factors considered in establishing buffer strip widths beyond minimums established by FSM and NEPA documents are: beneficial water uses, adjacent land use, rainfall, temperature, wind speed, wind direction, terrain, slope, soils and geology, vegetative type, and aquatic life. Other considerations include: persistence mobility, toxicity, and formulation of the pesticide, method of application, equipment used, spray pattern, droplet size, application height, and application pattern.

**EFFECTIVENESS:** High; reasoned, logical response, observation

**IMPLEMENTATION:** The interdisciplinary team and the Forest Pesticide Use Coordinator will identify and map protected areas during the NEPA process. Protection of untreated areas is the responsibility of the project supervisor for Forest Service applications and the Contracting Officer for contracted projects. The certified commercial applicators are briefed about location of protected areas. These areas are flagged or otherwise marked when necessary to aid in boundary identification.

**REFERENCES:** FSM 2526, 2527, 2245, and 2150; see references in **Best Management Practice** (05—2 and 3).

### **PRACTICE 13.13 – CONTROLLING PESTICIDE DRIFT DURING SPRAY APPLICATION**

**OBJECTIVE:** To minimize the risk of pesticide contaminating non-target areas.

**EXPLANATION:** Pesticide spray applications will be accomplished according to a prescription that specifies the following: areas to be left untreated, buffer areas, type of spray and associated materials, equipment and method to be used, droplet size, spray height, application pattern, flow rate, terrain, and weather. Hand spraying, with less associated risk, will have fewer application restrictions for drift than aerial spraying.

**EFFECTIVENESS:** High; reasoned, logical response, and observation

**IMPLEMENTATION:** The ID Team and the Forest or District Pesticide Use Coordinator prepare the prescription during the NEPA process. The Line Officer is responsible for designating a project supervisor who is responsible for ensuring the prescription is followed during application and for terminating application if the standards are exceeded.

**REFERENCES:** FSM 2150 and 2245; SWCP 13.12; Best Management Practice Definition (05—2 and 3). Other BMPs

- A spill cleanup kit will be available whenever pesticides (herbicides) are transported or stored.

- A spill contingency plan will be developed prior to all herbicide applications. Individuals involved in herbicide handling or application will be instructed on the spill contingency plan and spill control, containment, and cleanup process.
- Herbicide applications will only treat the minimum area necessary for control of noxious weeds.
- No spraying will occur when wind velocity exceeds 6 miles per hour or as specified on the label.
- Do not spray if precipitation is occurring or is imminent.
- Do not spray if air turbulence is sufficient to affect the normal spray pattern.

For additional information on SWCP's, including Objectives and Effectiveness, refer to Forest Service Handbook 2509.22 on file at the Supervisor's Office.

## Appendix B: Forest Plan Amendment

Implementation of Alternatives 2 in the Westside Collaborative Vegetation Management project requires site specific forest plan amendments to the Bitterroot Forest Plan (1987) (Westside EA pg. 1-22). The amendment modifies the following Forest Plan standards specifically as they relate to the Westside Project.

- Coarse woody debris standards.
- Elk Habitat Effectiveness
- Visual Quality Objectives

The need for these amendments to meet the purpose and need of the Westside project was disclosed during initial project scoping (Aug. 2015). This Appendix contains information that compliments the coarse woody debris, elk habitat effectiveness, and visual quality objective analyses in the EA.

Forest Service Manual (FSM) 1926.51 provides direction for determining what constitutes a “significant amendment” under NFMA. Based on this guidance, these site-specific forest plan amendments are not significant because they will not, individually or cumulatively, significantly alter the long-term relationship between levels of multiple-use goods and services originally projected in the Forest Plan. Also, they will not have an important effect on the entire land management plan, or affect land and resources throughout a large portion of the planning area during the planning period. The amendments modify standards and guidelines, specific to the Westside project area. Therefore, they are not a long-term change in the plan. The public has been notified of these amendments during the NEPA process.

The amendment analyses are organized to:

- Describe the amendment element
- Explain the purpose and the need for the amendment
- Describe the direct, indirect and cumulative effects of the amendment
- Apply the Forest Service Manual criteria for assessing whether or not the amendment is significant
- Display the conclusion on significance or non-significance.

### Coarse Woody Debris

#### *Proposed Coarse Woody Debris Site-Specific Amendment*

The Bitterroot Forest Plan (Forest Plan) includes the following Management Area (MA) standards relevant to coarse woody debris and the Westside Collaborative Vegetation Management project (Westside project):

MA 3a: (USDA Forest Service 1987, pp. III-19, f (4))

- Site preparation methods will assure the retention of modest levels of organic matter, including woody materials 8 inches or less in diameter, to provide nutrient and ectomycorrhizal levels necessary for maintaining growth rates; while still providing an adequate mineral base for seed germination and reduction of grass competition. On dry and harsh sites, at least 10 to 15 tons per acre of residual debris is needed (Harvey, et al 1981a & 1981b; Harvey, 1982).

The site-specific coarse woody debris standard to be applied for the Westside project would read:

- “To maintain soil productivity and wildlife habitat while meeting the fuel reduction purpose and need, coarse woody debris (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest at or above 5-10 tons/acre in Fire Groups 2 and 4. Material will be evenly distributed on each acre. At least minimum levels will be retained after prescribed fire treatments.” (Fire Groups are described in the Westside Collaborative Vegetation Management project EA, Chapter 3).

### *Purpose and Need of Woody Debris Standard Amendment*

#### **Amendment Purpose**

This proposed site-specific standard amendment is intended to apply the best available science to the coarse woody debris design of the Westside project and support goals and objectives in Forest Plan and project proposal. For this project, the proposed, ecologically-based standard would replace the management area standard in the 1987 Forest Plan (USDA Forest Service 1987, pp. III-19, f(4)).

#### **Intent of the Plan**

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-3, II-4)

- Maintain soil productivity
- Design fire management programs that are consistent with other resource goals (Appendices K and M)

Pertinent Forest Plan Objectives (USDA Forest Service 1987, pp. II-6, II-7)

- Design management activities to maintain soil productivity

#### **Need for the Amendment**

Since the Forest Plan was signed, additional science is available regarding the amount of coarse woody debris that would be expected in different habitat type groups (Graham et al. 1994; Brown et al. 2000), which provides more refined guidelines for meeting the Forest Plan goals and objectives. The amounts prescribed in the Forest Plan are sometimes contradictory to each other (i.e. 10 to 15 tons/acre in one standard and 25 tons/acre in another; sometimes referring to the same piece of ground). In addition, to reduce fire intensity (flame length and rate of spread), heavy amounts of coarse woody debris should not be left in stands in the Westside project area.

### *Effects of the Westside Coarse Woody Debris Amendment*

#### **Direct and Indirect Effects**

All harvest prescriptions for the Westside project would leave a portion of the existing stand on the site. The harvested tree would be either whole-tree yarded to the landing or the tree would be processed in the forest and the logs would be carried to the landing on a forwarder. Coarse woody debris (CWD) (material greater than 3 inches in diameter) will be left from designated leave trees, both standing and down, and from breakage of limbs and broken tops that will occur during harvest. Five to 10 tons/acre in Fire Groups 2 and 4 will maintain future soil productivity (PF-SOIL-005).

The proposed fuel treatments would leave slash on the ground through the winter and into late summer/fall before prescribed burning will be completed. This will provide opportunity for the nutrients in the slash to be leached into the soil.

**Cumulative Effects**

The CWD requirements for the Westside project are discussed in the soils section of Chapter 3 in the Westside EA. The CWD requirements are based on the most current science, which varies from the amounts shown in the current Forest Plan. The amended CWD requirements for this project will encompass less than 0.1 percent of the Bitterroot National Forest because very little of the project area is in fire groups 2 or 4. Since the 1987 Forest Plan, forest plan amendments have been made to adjust CWD levels. Site-specific forest plan amendments were needed to ensure CWD retention in fuel reduction treatments were based on current science. Previous forest plan amendments in combination with Alternative 2 of this project cumulatively amount to 1.5 percent of the Bitterroot National Forest. The modifications of the CWD requirements for this project will not have appreciable cumulative effects at the site or forest scale.

Cumulatively, by implementing this site-specific standard for CWD, the Westside project area is expected to have appropriate levels of CWD by fire group, over time, fully supporting the Forest goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific elk habitat effectiveness and visual quality modifications to the Forest Plan proposed in this project.

***Application of FSM 1926.51 “Not Significant” Criteria***

The determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

CHANGES TO THE LAND MANAGEMENT PLAN THAT ARE NOT SIGNIFICANT	COARSE WOODY DEBRIS STANDARD AMENDMENT
1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	<p>The coarse woody debris amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment will continue to work toward maintaining soil productivity by replacing the current Forest Plan Standard with one developed using more recent studies.</p> <p>The amendment affects a small area of the Bitterroot National Forest (about 0.1 percent). This site-specific project amendment will have no effect on Forest Plan objectives or outputs.</p>
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The coarse woody debris amendment does not adjust management area boundaries. It provides for more site-specific, ecologically-based management prescription applications by requiring a range of coarse woody debris based on habitat types.
3. Minor changes in standards and guidelines.	The coarse woody debris amendment is a minor change to management area standards based on more recent science.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	The coarse woody debris amendment applies more recent science to management prescriptions and provides an ecological basis for retaining coarse woody debris.

## Conclusion -- Significance/Non-Significance

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the coarse woody debris amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve current Forest Plan goals and objectives.

## Elk Habitat Effectiveness

### *Proposed Elk Habitat Effectiveness Forest Plan Amendment*

The Bitterroot Forest Plan (Forest Plan) includes the following Forest-wide standard for elk habitat effectiveness (EHE) (USDA Forest Service 1987, pp. II-21, F.1.e.(14)):

Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in currently roaded third order drainages. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built.

The site-specific EHE standard to be applied for the Westside project would read:

Manage roads through the Travel Plan process to attain or maintain 50 percent or higher elk habitat effectiveness (Lyon, 1983) in currently roaded third order drainages, except in the Lower Lost Horse third order drainage. Drainages where more than 25 percent of roads are in place are considered roaded. Maintain 60 percent or higher elk habitat effectiveness in drainages where less than 25 percent of the roads have been built, except in Hayes Creek third order drainage. In Lower Lost Horse third order drainage, 44 percent or higher elk habitat effectiveness will be maintained and 59 percent or higher elk habitat effectiveness will be maintained in Hayes Creek third order drainage.

### *Purpose and Need for the EHE Amendment*

This proposed site-specific Forest Plan amendment to the EHE standard would reduce the EHE standard by one percent in Hayes Creek and six percent in Lower Lost Horse third order drainages. The Hayes Creek third order drainage does not meet the Forest Plan EHE standard in “drainages where less than 25% of the roads have been built” because of the arterial road (NFSR 496) that traverses the drainage. All the local roads off the arterial road are closed and proposed for decommissioning and EHE is 59%, one percent below the 60% standard. To achieve the Forest Plan standard, a portion of NFSR 496 would need to be closed. Closing a portion of this road would prevent access to the Camas Creek trailhead and Lost Horse Observation Point. This Forest Plan amendment would maintain EHE at its current level.

The Lower Lost Horse third order drainage does not currently meet the Forest Plan EHE standard in “drainages where more than 25% of the roads have been built” because of several arterial roads that traverse the drainage, including NFSR 429, 496, 5620, 5621, and 62953. Alternative 2 would close several local roads off these arterial roads and improve EHE, but not enough to meet the EHE standard. To achieve the Forest Plan standard, a portion of one of the main arterial roads would need to be closed, which would prevent access to one of several important recreation destinations. This Forest

Plan amendment would maintain EHE in this drainage at the improved level achieved by road closures contained in Alternative 2.

### *Effects of the Westside EHE Amendment*

#### **Direct and Indirect Effects**

Under this amendment, none of the third order drainages in the Westside project area would decrease in elk habitat effectiveness. All areas will either maintain or improve the current EHE level or meet the Forest Plan standard. No new permanent roads will be created or opened as a result of this amendment, and related Forest Plan goals and objectives will still be met. The environmental analysis protocol includes elk security analysis (Hillis et al. 1991), which has proven to be a better tool than elk habitat effectiveness analysis for achieving the Forest Plan objective to maintain elk populations and hunting season opportunities in cooperation with Montana Fish, Wildlife and Parks. The elk security analysis indicates that elk security may be reduced by 1.1% in the elk trend count unit. Elk numbers in the area are relatively stable, which may reflect limited hunter access in areas that may not technically qualify as security area. The rugged topography in much of the area limits hunter access. Elk may also escape hunting pressure by moving to private land where hunting is limited or prohibited.

#### **Cumulative Effects**

The EHE requirements and levels for the Westside project are discussed in Wildlife Section of the EA. Understanding of the role EHE plays in elk security has changed over the years and is not considered as important a factor in providing effective elk habitat. Since the establishment of the Forest Plan in 1987, seven other similar site-specific amendments of the EHE standard have been made:

YEAR	3RD ORDER DRAINAGES (#)	ENVIRONMENTAL DOCUMENT	RANGER DISTRICT
1997	2	Camp Reimel EA	Sula
2001	3	Burned Area Recovery EIS	Darby, Sula
2002	5	Slate Hughes Watershed Restoration & Travel Management	West Fork
2008	5	Trapper-Bunkhouse EIS	Darby
2008	2	Haacke Claremont EA	Stevensville
2010	5	Lower West Fork EIS	West Fork
2011	5	Three Saddle EA	Stevensville

The cumulative effect of amending the EHE standard in the Westside project area in addition to the previous EHE amendments would be imperceptible at the Forest scale. Many of the third order drainages are within 10 percent of the EHE standard and the Bitterroot Valley elk population is stable. The Bitterroot Forest Plan objective and goals would continue to be met.

None of the ongoing or reasonably foreseeable projects would further reduce EHE in any of the third order drainages in the analysis area. The proposed actions, in combination with past and reasonably foreseeable actions in the analysis area, would not cumulatively degrade the effectiveness of elk habitat and fully support Forest Plan goals and objectives.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific visual quality and coarse woody debris modifications to the Forest Plan proposed in this project.

**Application of FSM 1926.51 “Not Significant” Criteria**

The determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

CHANGES TO THE LAND MANAGEMENT PLAN THAT ARE NOT SIGNIFICANT	ELK HABITAT EFFECTIVENESS STANDARD AMENDMENT
1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not alter the multiple-use goals and objectives for long-term land and resource management. The amendment affects a small area of the Bitterroot National Forest (about 1.6 percent). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs.
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The elk habitat effectiveness amendment does not adjust management area boundaries.
3. Minor changes in standards and guidelines.	The elk habitat effectiveness amendment is a minor change to management area standards; 1% below standard in Hayes Creek. Though EHE improves by 3% in Lower Lost Horse Creek drainage, it remains 6% below the standard. All other drainages in the project area exceed EHE standards
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	Three of the five third order drainages in the Westside project area greatly exceed Forest Plan Standards for elk habitat effectiveness and may compensate for Hayes Creek drainage being below standard by one percent.

**Conclusion -- Significance/Non-Significance**

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the Elk Habitat Effectiveness amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve Forest Plan goals and objectives.

**Visual Quality Objectives for Retention and Partial Retention**

**Proposed Visual Quality Objective Site-Specific Amendment**

The Bitterroot Forest Plan (Forest Plan) includes the following Management Area (MA) standards for Visual Quality Objectives in the Westside project (Westside project):

MA 3a (USDA Forest Service 1987, pp. III-16, b (1)): The visual quality objective is partial retention (USDA 1977)

MA 3c (USDA Forest Service 1987, pp. III-31, b (1)): The visual quality objective is retention (USDA, 1977).

The site-specific visual quality objective standards to be applied to Alternative 2 in the Westside project would read:

- “MA 3a: The visual quality objective is partial retention (USDA 1977) except for Units 3a, 3b, 3c, 4b, and 9b. The visual quality objective in these units is modification for the next 10 years.
- MA 3c: The visual quality objective is retention (USDA, 1977) except for Unit 7c. The visual quality objective in Unit 7c is modification for the next 10 years.

### *Purpose and Need for Amendment to the Visual Quality Objective Standard*

#### **Amendment Purpose**

This proposed site-specific standard amendment is intended to negotiate between competing forest plan direction. Standards for timber harvest in Management Areas 3a and 3c include:

The most efficient, visually and silviculturally acceptable logging systems will be utilized along with partial retention road density standards.

Openings created by timber harvest should be designed to blend with natural-sized openings. They will normally be 5 to 15 acres, but could be larger to blend with natural landscape patterns and to control insects and diseases (USDA Forest Service 1987, pp. III-18, e (6)).

MA 3c differs from MA 3a in that openings are generally smaller, less than seven acres. Though the standards for prescribing treatments meet Forest Plan standards and design features in the Westside project are planned to address visual quality concerns, they are apparently not adequate to meet the partial retention criteria in Units 3a, 3b, 3c, 4b, and 9b or retention criteria in Unit 7c. The forest remaining after treatment in these units may not be adequate to screen the proposed temporary roads, landings, and skyline corridors created during harvest. The VQO following treatment in these units is estimated to be modification.

#### **Intent of the Plan**

Pertinent Forest Plan Goals (USDA Forest Service 1987, pp. II-4)

- Maintain a high level of visual quality on landscapes seen from population centers and major travel routes, and adjacent to fishing streams.
- Provide sawtimber and other wood products to help sustain a viable local economy.
- Seek out opportunities for biologically appropriate and cost-efficient uneven-aged management.
- Provide an economically efficient sale program.

#### **Need for the Amendment**

The proposed treatment effects, as analyzed under worst case scenario, would create a long term decrease in scenic integrity to the viewshed for a period greater than one year. However, with no treatment, beetle infestation and fire risk could increase over larger portions of the landscape, thus increasing the risk of reduced scenic integrity for the foreseeable future. The visual quality objectives (VQOs) in Units 3a, 3b, 3c, 4b, 9b, and 7c of the Westside Project would be reduced from Partial Retention or Retention, respectively, to Modification for up to 10 years. There is potential that the effects would be less than the worst case scenario if design features are applied effectively.

*Effects of the Westside Visual Quality Objective Amendment*

**Direct and Indirect Effects**

Units 3a, 3b, 3c, 4b, and 9b would possibly reduce the VQO on 3% (126/3,870 acres) of Management Area 3a in the Westside project area. Unit 7c would possibly reduce the visual quality objective on 15% (92/608 acres) of Management Area 3c in the Westside project area. These units are visible from the Highway 93 corridor and individual homes and dispersed communities. They are not visible from population centers. Design features and silvicultural prescriptions that retain forest cover and develop uneven-aged forest conditions would provide some screening of the linear features created by the roads, landings, and skyline corridors though not enough to meet the VQOs of partial retention and retention, respectively, under a ‘worst case scenario’ analysis.

**Cumulative Effects**

There have been no other VQO changes in Management Area 3a on the Bitterroot National Forest. This VQO amendment in Management Area 3a would be a minor change for both the Westside project area and the Bitterroot National Forest (0.1% of the management area across the Forest).

Unit 8 in the Como Forest Health project is the only other unit in Management Area 3c in which the VQO was amended in the Bitterroot National Forest Plan. The combination of Unit 8 in the Como Forest Health project and Unit 7c in the Westside Collaborative Vegetation Management Project is 130 acres of the 7,027 (1.8% of Management Area 3c across the Forest). Modifying the Management Area 3c VQO for Unit 7c is a minor change both in the project area and the Management Area across the Forest. Cumulatively, by implementing this site-specific VQO standard, longer term effects created by potential insect outbreaks or wildfires similar to other areas along the Bitterroot face would be avoided. Application of the VQO amendment in the Westside project area would support the Forest competing goals of maintaining high levels of visual quality and controlling insects and disease, providing sawtimber, and developing uneven-aged forest conditions.

There is no perceptible cumulative effect of this modification, in conjunction with the site-specific elk habitat effectiveness and coarse woody debris modifications to the Forest Plan proposed in this project.

*Application of FSM 1926.51 “Not Significant” Criteria*

The determination of whether this amendment is significant was done using the process in FSM 1926.51. The handbook states that changes to the land management plan that **are not significant** can result from four specific situations. This site-specific amendment is compared to those situations below:

CHANGES TO THE LAND MANAGEMENT PLAN THAT ARE NOT SIGNIFICANT	VISUAL QUALITY OBJECTIVE STANDARD AMENDMENT
1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.	<p>The VQO amendment does not alter the multiple-use goals and objectives for long-term land and resource management.</p> <p>The amendment affects a small area of the Bitterroot National Forest (about 0.1% MA 3a and 1.8% MA 3c, respectively). This short-term, site-specific project amendment will have no effect on Forest Plan objectives or outputs</p>

CHANGES TO THE LAND MANAGEMENT PLAN THAT ARE NOT SIGNIFICANT	VISUAL QUALITY OBJECTIVE STANDARD AMENDMENT
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management.	The VQO amendment does not adjust management area boundaries or change of multiple use goals and objectives for resource management.
3. Minor changes in standards and guidelines.	The VQO amendment is a minor change to management area standards because the affected areas are a small portion of the Bitterroot National Forest.
4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.	There are no other opportunities for additional projects or activities that will contribute to achievement of the management prescription for visual quality objectives.

**Conclusion -- Significance/Non-Significance**

Based on consideration of the four factors identified in FSM 1926.51, and considering the Forest Plan in its entirety, the adoption of the VQO amendment to the Bitterroot National Forest Plan is not significant. This amendment is fully consistent with, but further refines and clarifies the means to achieve current Forest Plan goals and objectives.



## Appendix C: List of Contacts for the Westside Collaborative Vegetation Management Project

This appendix lists the individuals, businesses, organizations, agencies, and tribal, local, state, and national governments we contacted or who participated in the Westside Collaborative Vegetation Management analysis.

*Table C-1: Individuals Contacted during the Westside Analysis Process*

Name	Location	Name	Location
Adams, Brian	e-mail	DeVall, Tracy	e-mail
Alford, John	e-mail	Dieterich, Michele	Hamilton, MT
Anderson, James	Darby, MT	Doucey, Jack	e-mail
Andre, John and Anita	Hamilton, MT	Doughty, Barrett and Linda	Hamilton, MT
Aroy, Marya	e-mail	Edson, Scott	Hamilton, MT
Artley, Dick	Grangeville, ID	Eggensperger, Jack	e-mail
Ashcroft, William	Hamilton, MT	Engle, Helen	e-mail
Banner, Robert	Hamilton, MT	Fahrni, C.R. and Nancy	Hamilton, MT
Banner, Tabitha	Hamilton, MT	Fleenor, Bruceen	Hamilton, MT
Barry, Connie	Conner, MT	Foss, Lee and Suzy	Hamilton, MT
Bartholomew, Robert and Patricia	Hamilton, MT	Foss, Sam and Carol	Hamilton, MT
Belanger, Paul		Francisco, Ken	Hamilton, MT
Bernard, Jeff	Hamilton, MT	Frost, Betty and Dean	Hamilton, MT
Binkley, Dwayne and Michelle	Hamilton, MT	Frost, Glen	Hamilton, MT
Black, Bill and Barbara	Hamilton, MT	Germann, John and Barbara	Hamilton, MT
Blume, Kevin and Angela	Hamilton, MT	Gibney, John and Donna Rae	Hamilton, MT
Bradley, Liz	e-mail	Good, Kathryn	Hamilton, MT
Bratvold, Tracy & Cindi	Hamilton, MT	Grewe, Wally and Judy	Hamilton, MT
Breglia, Michael	e-mail	Giuliani, Mike	e-mail
Brindle, JaneH	Hamilton, MT	Haberman, William	Hamilton, MT
Busa, Cheryl and Francis	Hamilton, MT	Hansen, Carol & James	Hamilton, MT
Campbell, Dave	Hamilton, MT	HardingRuss and Rena	Hamilton, MT
Cardone, Richard	e-mail	Harrington, Mick	Hamilton, MT
Caughey, Brian and Pamela	Hamilton, MT	Hart, Robert and Kerryellen	Hamilton, MT
Charles, Robert and Barbara	Hamilton, MT	Hart, William	Spring, TX
Christopherson, Leroy	Missoula, MT	Hasenkrug, Kim and Marie Anne	Victor, MT
Ciliberti, Vito	Hamilton, MT	Holsapple, Haven and Wendy	Hamilton, MT
Clancy, Christopher	e-mail	Hunner, Bruce	e-mail
Clarkson, Pete	Hamilton, MT	Hutson, Richard	Hamilton, MT
Coates, Maurice and Venice	Hamilton, MT	Iten, Mick and Jane	Hamilton, MT
Coggins, Fred and Annette	Hamilton, MT	Jaquith, Joe	e-mail
Constanzo, Mike and Judith	Hamilton, MT	Jarsky, Seth	Missoula, MT
Corn, George	Hamilton, MT	Johnson, Elizabeth	Hamilton, MT
Corter, Allen	Hamilton, MT	Johnson DVM, Mark	Hamilton, MT

Appendix C – List of Contacts

Name	Location	Name	Location
Curdy, Ronald and Linda	Hamilton, MT	Jonkel, James	e-mail
Jordan, Dean	e-mail	Radlowski, Matt	e-mail
Juel, Jeff	Spokane, WA	Rainbolt, Katherine	Denver, CO
Kagan, Cynthia	Hamilton, MT	Rainbolt, Tahlia	Sante Fe, NM
Killebrew, George and Sandra	Sumrall, MS	Ransom, Pete and Laurie	Hamilton, MT
Kirkbride, Terry and Portia	Hamilton, MT	Richard, Francis and Lucille	Hamilton, MT
Kostick, Dave	Hamilton, MT	Rimensberger, Joe	e-mail
Kowalski, Gerald	Stevensville, MT	Rohrbach, Fred and Polly	Seattle, WA/ Hamilton, MT
Kubat, Gary	e-mail	Rohrbach, Kurt	Hamilton, MT
Kupko, Nate	Victor, MT	Rohrbach, Matthew	Hamilton, MT
Lavender, Richard and Barbara	Hamilton, MT	Rokusek, Nancy	Hamilton, MT
Lee, Cody and Darrell	Hamilton, MT	Roman, Joseph	Hamilton, MT
Levin, Bruce and Pamela	Corona Del Mar, CA	Romero, Dennis and Marjorie	Hamilton, MT
Lewis, Stacy	e-mail	Rothlisberger, Dan	Hamilton, MT
Liechty, Tammy	e-mail	Rutherford, Frank	Hamilton, MT
Linkenhoker, Chris	Corvallis, MT	Samulevich, Peter	Hamilton, MT
Long, Aden	Hamilton, MT	Schmitt, Darlene	Darby, MT
Lonn, Jeff	Hamilton, MT	Scribner, Doug	Hamilton, MT
Maize, John	Hamilton, MT	Shine, Cathy	Hamilton, MT
McCormack, James	Stevensville	Shulund, Gail	Hamilton, MT
McKenzie, Brittany	Hamilton, MT	Smith, Dr. Robert and Kelly	Hamilton, MT
Moates, Tom and Jan	Hamilton, MT	Soulliard, Cory	e-mail
Mowry, Rebecca	e-mail	Sowles, Marisa	e-mail
Mutch, Robert	Hamilton, MT	Spadone, Donald and Joyce	Reno, NV
Nelson, Jeanine	Hamilton, MT	Thompson, Kirk	Stevensville, MT
Ormiston, John	Hamilton, MT	Tourangeau, Richard and Patricia	Hamilton, MT
Oset, Bob	Hamilton, MT	Tresemmer, Erica	e-mail
O'Shea, Tyrone and Randi	Hamilton, MT	Turek, Tracey	Hamilton, MT
Overmier, Jeff and Charlene	Hamilton, MT	Vaccarella, Patricia	Hamilton, MT
Parnham, Brian	e-mail	Van ArsdaleJon	Hamilton, MT
Patman, Gerald and Linda	Hamilton, MT	Waliser, Jim and Marsha	Hamilton, MT
Petroni, Mark	e-mail	Wheeler, Steven	Darby, MT
Porter, Ron	Hamilton, MT	Wymer, Dean	Hamilton, MT
Preston, Melvin and Jane	Hamilton, MT		

*Table C-2: Organizations or Businesses Contacted during the Analysis Process.*

Name	Organization or Business	Location
Asay, Pat	NorthWestern Corp.	Butte, MT
Bonney, Byron	Bitterroot RC&D	Hamilton, MT
Burson, Steve	Storm Creek Outfitters	Darby, MT
Chouinard, Dustin	Markette & Chouinard, P.C.	Hamilton, MT
Cotton, Bethany	Wild Earth Guardians	Missoula, MT

<b>Name</b>	<b>Organization or Business</b>	<b>Location</b>
Dobbins, Stuart and Linda	Deer Crossing Bed & Breakfast	Hamilton, MT
Garrity, Michael	Alliance for the Wild Rockies, Native Ecosystems Council, Montana Ecosystems Defense Council	Helena, MT
Henderson, Tom	Bitterroot Outfitters	Hamilton, MT
Hogan, Marcia/Hedman, Wayne	Bitterroot Restoration Committee	Hamilton, MT
Jeffords, Mike and Kathy	Ravalli County Off-Road Users Association	Lolo, MT
Kern, Jeff	Bitterroot Backcountry Cyclists	Hamilton, MT
Leavell, Randy	Valley Bicycles	Hamilton, MT
Lehrman, John	Downing Mountain Lodge	Hamilton, MT
Lonn, Jeff	Westside Residents/Coyotee Coulee Trail Users	Hamilton, MT
Markette, David	Markette & Chouinard, P.C.	Hamilton, MT
Miller, Jim	Friends of the Bitterroot	Hamilton, MT
Nielsen, Mike	Beaudette Consulting Engineering, Inc.	e-mail
Reinsel, Ph.D., P.E., Mark	Apex Engineering, PLLC	Missoula, MT
Retzlaff, Owen	Pyramid Lumber	Seeley Lake, MT
Weisbecker, Fred	Bitterroot Back Country Horsemen	Hamilton, MT
	GARVO	Mesa, AZ

**Table C-3: Governments and Agencies Contacted during the Westside Analysis Process.**

<b>Name</b>	<b>Title</b>	<b>Organization</b>	<b>Location</b>
Vernon Finlay	Tribal Chairman	Confederated Salish & Kootenai Tribes of the Flathead Reservation	Pablo, MT
Ira Matt, Sr.	Tribal Preservation Officer	Confederated Salish & Kootenai Tribes of the Flathead Reservation	Pablo, MT
Michael Durglo, Sr.	Director, Tribal Preservation Department	Confederated Salish & Kootenai Tribes of the Flathead Reservation	Pablo, MT
	Ravalli County Commissioners	Ravalli County Commission	Hamilton, MT
Erik Hoover	Office of Emergency Management	Ravalli County	Hamilton, MT
Brad Mohn	Hamilton Fire Department		Hamilton, MT
Marc Snively	Darby Fire Department		Darby, MT
Mike Thompson		Montana Fish, Wildlife and Parks	Missoula, MT
Ms. Katie Eiring		Montana Department of Environmental Quality	Helena, MT
Robert Ray		Montana Department of Environmental Quality	Helena, MT
		US Environmental Protection Agency	Helena, MT
Jodi Bush		U.S. Fish and Wildlife Service	Helena, MT
	Region 2 Manager	Montana Fish, Wildlife and Parks	Missoula, MT
		Charlos Irrigation District	Hamilton, MT
		Bitter Root Irrigation District	Corvallis, MT
O'Herron, Mike			Missoula, MT

Appendix C – List of Contacts

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<b>Name</b>	<b>Title</b>	<b>Organization</b>	<b>Location</b>
Bookwalter, Mo		Department of Natural Resources and Conservation	Missoula, MT
Pat Connell	State Senator		Hamilton, MT
Theresa Manzella	State Representative		Hamilton, MT
Nancy Ballance	State Representative		Hamilton, MT
Ed Greef	State Representative		Florence, MT
Fred Thomas	State Senator		Stevensville, MT
Steve Daines	U.S. Senator		Missoula, MT
John Tester	U.S. Senator		Missoula, MT
Ryan Zinke	U.S. Representative		Helena, MT