CHAPTER 1. PURPOSE AND NEED FOR ACTION

Document Structure

The Forest Service has prepared this Draft Environmental Impact Statement (DEIS) in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This DEIS discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four chapters:

- Chapter 1. Purpose and Need for Action: The chapter includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
- Chapter 2. Alternatives to the Proposed Action: This chapter provides alternative methods for achieving the stated purpose. These alternatives were developed based on key issues raised by the public, Forest Service employees, and other agencies. This discussion also includes design criteria for alleviating potential negative effects. Finally, this section provides summary tables of the environmental consequences associated with each alternative.
- Chapter 3. Affected Environment and Environmental Consequences: This chapter describes the potential environmental effects of implementing the proposed action and other alternatives. This analysis is organized by resource area.
- Chapter 4. Consultation and Coordination: This chapter provides a list of preparers and agencies consulted during the development of the environmental impact statement.
- Appendices: The appendices provide more detailed information to support the conclusions presented in the environmental impact statement. Included is a glossary that defines abbreviations, acronyms, and terms used. Most abbreviations are defined when first used in the text and most terms are defined in the glossary to avoid interrupting the text.

Additional documentation, including more detailed analyses of project-area resources, may be found as exhibits in the project planning record, or project file, located at the Tally Lake Ranger District in Whitefish, Montana. Project file exhibits are often referenced in this DEIS and are referred to simply as "Exhibit T-1" as an example.

Background

Wildland fires south of the town of Hungry Horse, Montana burned a total of approximately 30,000 acres on the Hungry Horse and Spotted Bear Ranger Districts of the Flathead National Forest. Lightning storms on August 19, 2003, ignited a series of wildland fires scattered across approximately 30 miles of the east facing-slope of the Swan Range just west of the Hungry Horse Reservoir. This series of fires were managed as the Blackfoot Lake Complex during suppression efforts but are now collectively known as the West Side Reservoir Fires.

Individual fires occurred across a large area and were grouped for planning purposes. Here is some basic information about these fires, all of which burned only on National Forest System lands:

Group Name	*Individual Fires within Group*	*Ranger District*	*Acres in Group*
Beta	Beta, Doris	Hungry Horse	5357
Doe	Doe, Wounded Buck	Hungry Horse	3076
Blackfoot	Blackfoot Lake	Hungry Horse	15,056
Ball	Ball	Spotted Bear	8116

A Forest Service Burned Area Emergency Rehabilitation (BAER) team was assigned in August 2003 to determine emergency watershed rehabilitation needs created by the fires. Some of the needs identified in their analysis included aerial seeding of conifer seed; shrub planting; hazard tree removal along trails; cleaning road ditches, culvert inlets, and catch basins; constructing diversion dips on roads; and upgrading culverts. These actions began in late 2003 and will continue in the summer of 2004 (Exhibit E-2).

Proposed activities for the West Side Reservoir Post-Fire Project were developed by an interdisciplinary team (IDT) and were based upon an evaluation of areas in and around those that burned in 2003. This team includes the same members who have put together this DEIS and is made up of a variety of specialists (wildlife biologist, soil scientist, fisheries biologist, hydrologist, fire and fuel specialists, recreation specialist, landscape architect, transportation planner, archeologist, and silviculturist). The evaluation was conducted to better understand:

- the impact of the fires on the resources across the landscape;
- the existing condition of key resources within the area on a broader, landscape scale; and
- a desired future range of conditions using public involvement, current management direction, regulations, and laws.

The evaluation (resource specialist reports in the Project Record) suggested several management actions appear appropriate at this time. The Proposed Action was then developed through interdisciplinary consideration of resource conditions.

The West Side Reservoir Post-Fire Project area is located in Flathead County and is approximately 20 air miles east of Kalispell, Montana (refer to Vicinity Map, Figure 1-1). The area is approximately 181,700 total acres with about 114,600 of this managed by the Hungry Horse Ranger District (headquartered in Hungry Horse, Montana) and about 67,100 acres managed by the Spotted Bear Ranger District (headquartered in Spotted Bear, Montana). The entire project area and activities proposed in this DEIS are entirely located on National Forest System lands. Some trails affected by the proposed activities are located on the Swan Lake Ranger District (headquartered in Big Fork, Montana). The analysis area is

located entirely in or portions of the following townships: T30N, R20W; T30N, R19W; T29N, R19W; T29N, R18W; T28N, R19W; T28N, R18W; T28N, R17W; T27N, R18W; T27N, R17W; T27N, R16W; T26N, R18W; T26N, R17W; T26N, R16W; T25N, R17W; and T25N, R16W. Maps of the analysis area with prominent landscape features, such as roads and streams, are shown in the Alternative B Proposed Salvage Treatment Plan, Figures 1-2 to 1-5.

Purpose & Need for Action

The Flathead National Forest Land and Resource Management Plan (USDA Forest Service 1986) provides the basis for managing the Flathead National Forest. A variety of current conditions, as determined by an ID Team of specialists on the Hungry Horse and Spotted Bear Ranger Districts, provide the purpose and need for management action in the West Side Reservoir area. **The purpose of the proposed management action is to recover merchantable wood fiber affected by fires in a timely manner to support local communities and contribute to the long term yield of forest products while striving to meet the goals and standards of the Flathead National Forest Land and Resource Management Plan (Forest Plan).**

Recover Merchantable Wood Fiber in a Timely Manner

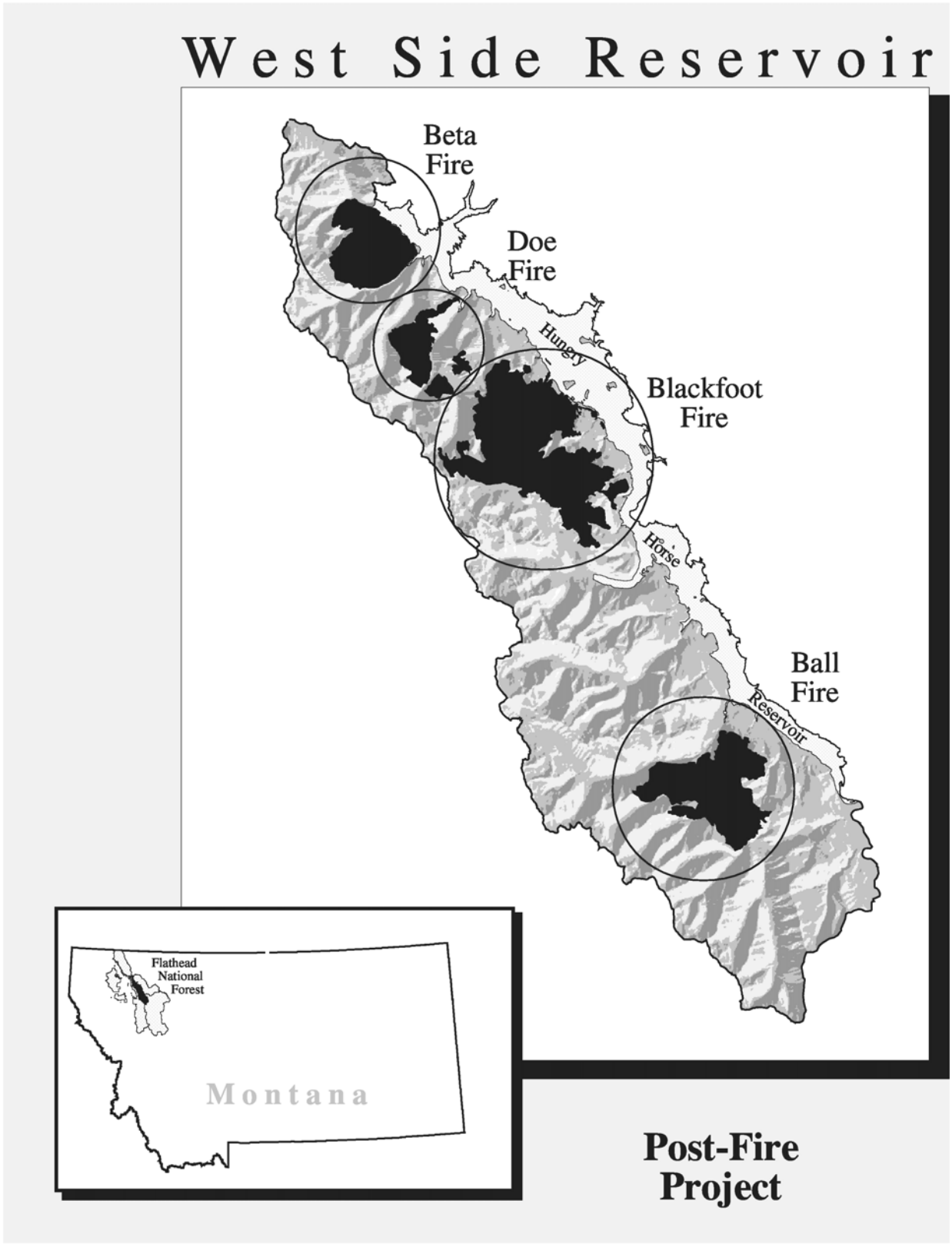
There is a need to manage forests in a sustainable condition as it positively affects the local community social environment. Timber production and associated contracted activities from the Hungry Horse and Spotted Bear Ranger Districts contribute to the local economy. The level of timber harvest directly affects current income, employment, and county revenues. The Forest Plan designates much of the West Side Reservoir area as emphasizing cost-efficient production of timber while protecting the productive capacity of the land and timber resource (please see Appendix B).

Most of Flathead County is comprised of federal lands. Kalispell, Columbia Falls, and Whitefish are considered "Timber Specialized Communities" (US Department of Agriculture and Department of Interior 1998). A large amount of the timber processed in the county comes from federal lands. Jobs and income associated with timber harvest and related activities on the Flathead National Forest can help support local economies.

The West Side Reservoir Project proposes to harvest burned timber in a timely manner to provide wood products to the local community while it is still economically feasible to do so. Past experience with fire salvage in northwestern Montana indicates that so-called "white-wood species" such as spruce, subalpine fir, lodgepole pine, and western white pine substantially deteriorate within a year or so after a fire. Salvage operations would need to begin in the winter of 2004/05 to ensure economic utilization of the whitewood species.

Western larch and Douglas-fir resist checking and rot for a longer period of time, perhaps two or three years. But because these more rot-resistant species are intermingled with whitewood species within drainages in the proposed project area, it is most cost-efficient to begin harvesting these species in early 2005 when harvest of the whitewood species is economically feasible.

Figure 1-1. Project Vicinity Map



In general, the species composition of the burned areas is mixed stands of spruce, Douglas-fir, and western larch in the riparian areas along streams and at low to mid elevations. The high-elevation forests are dominated by spruce and subalpine fir. Western white pine is an occasional forest component primarily at lower elevations, and lodgepole pine is found scattered throughout from riparian areas up into the high-elevation spruce-fir forest. Other species such as western red cedar, grand fir, and birch are found in minor quantities at low elevations.

Proposed Action

The action proposed by the Forest Service to meet the purpose and need includes timber salvage harvest; decommissioning some roads; and changing road and trail access. The action was developed as a strategy to salvage merchantable wood while striving to comply with Forest Plan direction.

Implementation of the Proposed Action or an alternative to the Proposed Action would occur over the course of several years. The Record of Decision signed as a result of this EIS process would direct activities for the entire implementation period; however, activities in later years may need to be reviewed for compliance with applicable laws if conditions or policy change.

This action responds to the goals and objectives outlined in the Forest Plan, and helps move the project area towards desired conditions described in that plan. The Forest Plan embodies the provisions of the National Forest Management Act (NFMA), its implementing regulations, and other guiding documents. The Forest Plan sets forth in detail the direction for managing the land and resources of the Flathead National Forest. This Draft EIS tiers to the Forest Plan Final EIS and Record of Decision, in compliance with 40 CFR 1502.2. The Forest Plan uses "management areas," or MAs, to guide management of National Forest System lands. Each MA provides a unique combination of activities, practices, and uses. Activities would take place in the West Side Reservoir area within Management Areas 2A, 2B, 7, 12, 13, 13A, 15, 16, and 17, as described in the Forest Plan (2001 version) on pages III-5 through III-11, III-17 through III-30, III-52 through III-66, III-70 through III-76, and III-82 through III-88. Descriptions of the goals and objectives of these and all management areas in the project area are described in Appendix B of this DEIS.

Timber Salvage Management Proposals

Timber salvage and related activities are proposed to meet the purpose and need of this project. Please refer to the Alternative B Proposed Vegetation Treatment Maps (Figures 1-2 to 1-5) for locations of the salvage units. Vegetation treatments would include:

- Approximately 4921 acres of commercial timber salvage harvest, after patch reductions are included (see end of next table for explanation of patches). Harvest activities would occur in 131 different units within the project area. Areas proposed for salvage logging were selected based on the amount, size, and type of burned

timber available. Some areas that could be salvaged based on the size and amount of burned timber were avoided due to their Forest Plan management area designation or they were designated as inventoried roadless areas. Only dead trees affected by the fire are targeted for removal; however a small amount of green trees may need to be felled and removed to facilitate the log yarding operations and to meet safety guidelines. Definitions of dead trees are discussed in detail in Appendix E. Each timber salvage unit was designed to be logged using the most economical logging system practical for that particular site while still protecting resources such as soil, wildlife, and water. Some units would be required to be logged in winter conditions for site protection purposes or to maintain grizzly bear security. Please see the unit by unit description in the following table.

- Disposal of landing slash. Commercial timber harvest activities typically generate a large volume of waste wood at the log landing. This material is typically piled at or near the landing and later burned in the fall or early winter when pile burning would not create a wildland fire risk. The number and locations of these landings is not currently known. Reducing activity related fuels within the salvage units would not be necessary.

- Approximately 1354 acres of tree planting of seedling sized trees of western larch, Douglas-fir, western white pine, and possibly a minor amount of other tree species. Site preparation prior to planting to remove down wood or vegetation that might hinder the planting operations would not be necessary. The remaining acres of salvaged ground would be reforested using natural regeneration methods.

Table 1-1. Proposed Action Units for Commercial Timber Salvage.

Unit Number*	Original Acres@	Patch Percent Reduction#	Revised Acres	Snag Emphasis Level	Yarding System	Regeneration Method	Winter Logging Required?
Beta Fire							
1H	46	25	35	1	Helicopter	Natural	
1R	7	0	7	3	Helicopter	Natural	
1S	39	25	29	1&3	Skyline	Natural	
2R	1	0	1	3	Helicopter	Natural	
2S	85	25	64	1&3	Skyline	Natural	
3H	62	25	47	1&3	Helicopter	Natural	
3R	3	0	3	3	Helicopter	Natural	
4H	28	25	21	1&3	Helicopter	Natural	
4R	11	0	11	3	Helicopter	Natural	
5	13	0	13	1&3	Ground-based	Natural	yes
5R	8	0	8	3	Helicopter	Natural	
6R	7	0	7	3	Helicopter	Natural	
6S	10	0	10	1&3	Skyline	Natural	
7	13	0	13	1&3	Ground-based	Natural	yes
7R	7	0	7	3	Helicopter	Natural	
7S	21	25	16	1&3	Skyline	Natural	
8	7	0	7	1&3	Ground-based	Natural	yes
8R	9	0	9	3	Helicopter	Natural	
9H	81	25	61	1&3	Helicopter	Natural	

Unit Number*	Original Acres@	Patch Percent Reduction#	Revised Acres	Snag Emphasis Level	Yarding System	Regeneration Method	Winter Logging Required?
9R	4	0	4	3	Helicopter	Natural	
9S	7	0	7	1	Skyline	Natural	
10H	76	15	65	2	Helicopter	Natural	
10R	2	0	2	3	Helicopter	Natural	
11	5	0	5	3	Ground-based	Natural	yes
11H	58	25	44	1	Helicopter	Natural	
12	68	25	51	1	Ground-based	Natural	yes
13S	123	25	92	1	Skyline	Plant	yes
14H	351	25	263	1&3	Helicopter	Natural	
15H	208	25	156	1	Helicopter	Natural	
16	88	25	66	1	Ground-based	Natural	yes
17S	77	25	58	1&3	Skyline	Plant	yes
18	9	0	9	3	Ground-based	Natural	yes
18S	84	25	63	1&3	Skyline	Natural	
19H	23	25	17	1&3	Helicopter	Natural	
19S	33	25	25	1&3	Skyline	Natural	
20	39	0	39	2&3	Ground-based	Natural	yes
21H	20	0	20	2	Helicopter	Natural	
22S	43	25	32	1&3	Skyline	Natural	
23S	8	0	8	1&3	Skyline	Natural	
24	11	0	11	1&3	Ground-based	Natural	yes
25H	329	25	247	1&3	Helicopter	Natural	
26H	50	25	38	1&3	Helicopter	Plant	
27	30	25	23	1&3	Ground-based	Natural	yes
28	9	0	9	3	Ground-based	Natural	yes
subtotal	2213		1723				
Doe Fire							
101H	204	25	153	1	Helicopter	Plant	
102H	20	0	20	2	Helicopter	Natural	
103H	22	15	19	2	Helicopter	Natural	
104H	83	25	62	1	Helicopter	Natural	
105H	25	25	19	1	Helicopter	Natural	
106H	21	15	18	2	Helicopter	Natural	
subtotal	375		291				
Blackfoot Fire							
201H	53	25	40	1	Helicopter	Plant	
202	7	0	7	1	Ground-based	Natural	yes
202H	60	15	51	2	Helicopter	Plant	
202S	6	0	6	2	Skyline	Natural	
203	33	25	25	1	Ground-based	Plant	yes
203H	58	15	49	1	Helicopter	Plant	
203S	96	25	72	1&3	Skyline	Plant	
204	15	0	15	1&3	Ground-based	Natural	yes
204H	17	0	17	2	Helicopter	Natural	
205	13	0	13	2	Ground-based	Natural	yes
205H	109	25	82	1	Helicopter	Plant	
206	74	25	56	1&3	Ground-based	Natural	yes
206H	113	15	96	2&3	Helicopter	Plant	
207	17	0	17	1	Ground-based	Natural	yes
207H	103	25	77	1	Helicopter	Natural	
207S	15	0	15	1&3	Skyline	Natural	
208H	9	0	9	2&3	Helicopter	Natural	
209H	33	15	28	2	Helicopter	Natural	

Unit Number*	Original Acres@	Patch Percent Reduction#	Revised Acres	Snag Emphasis Level	Yarding System	Regeneration Method	Winter Logging Required?
210	8	0	8	2&3	Ground-based	Natural	yes
210H	9	0	9	2&3	Helicopter	Natural	
211	14	0	14	2	Ground-based	Natural	yes
212	31	25	23	1	Ground-based	Natural	yes
212S	20	0	20	2	Skyline	Natural	
213H	17	0	17	2	Helicopter	Natural	
214H	9	0	9	2	Helicopter	Natural	
215H	46	0	46	2	Helicopter	Natural	
216H	22	25	17	1	Helicopter	Natural	
216S	28	25	21	1	Skyline	Natural	
217H	71	25	53	1	Helicopter	Natural	
218H	19	0	19	2	Helicopter	Natural	
219H	57	25	43	1	Helicopter	Natural	
220H	16	0	16	2	Helicopter	Natural	
220S	37	15	31	2	Skyline	Natural	
221H	46	15	39	2	Helicopter	Natural	
222H	21	15	18	2	Helicopter	Plant	
223	6	0	6	2	Ground-based	Natural	yes
223H	105	15	89	2	Helicopter	Plant	
224H	40	25	30	1	Helicopter	Natural	
224S	60	25	45	1	Skyline	Natural	
225	8	0	8	1	Ground-based	Natural	yes
225H	36	15	31	2	Helicopter	Natural	
225S	35	25	26	1	Skyline	Natural	
226	9	0	9	2	Ground-based	Natural	yes
226H	97	15	82	2	Helicopter	Natural	
227H	3	0	3	2	Helicopter	Natural	
228H	34	15	29	2	Helicopter	Natural	
229H	44	15	37	2	Helicopter	Natural	
230R	6	0	6	3	Helicopter	Plant	
231R	2	0	2	1	Helicopter	Plant	
232R	1	0	1	3	Helicopter	Plant	
234R	4	0	4	3	Helicopter	Plant	
235R	9	0	9	3	Helicopter	Plant	
subtotal	1801		1495				
Ball Fire							
301H	48	25	36	1	Helicopter	Natural	
302H	11	0	11	1	Helicopter	Natural	
303H	114	25	86	1	Helicopter	Plant	
304H	43	25	32	1	Helicopter	Natural	
305	32	25	24	1	Ground-based	Plant	yes
305H	22	25	17	1	Helicopter	Plant	
306	29	25	22	1	Ground-based	Natural	yes
306H	17	0	17	1	Helicopter	Plant	
307	25	25	19	1	Ground-based	Plant	yes
307H	39	25	29	1	Helicopter	Plant	
308	16	0	16	1	Ground-based	Plant	yes
309H	100	15	85	2	Helicopter	Plant	
310H	11	0	11	1	Helicopter	Natural	
311H	51	25	38	1	Helicopter	Plant	
312H	107	25	80	1	Helicopter	Natural	

Unit Number*	Original Acres@	Patch Percent Reduction#	Revised Acres	Snag Emphasis Level	Yarding System	Regeneration Method	Winter Logging Required?
313H	35	25	26	1	Helicopter	Plant	
314	20	0	20	1	Ground-based	Natural	yes
315	28	0	28	2	Ground-based	Natural	yes
316H	5	0	5	2	Helicopter	Natural	
317H	125	0	125	1	Helicopter	Natural	
318	27	0	27	1	Ground-based	Natural	yes
319S	123	25	92	1	Skyline	Plant	yes
320S	62	15	53	2	Skyline	Natural	yes
321H	274	25	206	1	Helicopter	Natural	
322H	153	15	130	2	Helicopter	Natural	
323	20	0	20	2	Ground-based	Plant	yes
323H	20	0	20	2	Helicopter	Natural	
324H	182	25	137	1	Helicopter	Natural	
subtotal	1739		1412				
TOTAL	**6128**		**4921**				

* Units with an H or R designation indicate a helicopter logging system. Units with an S designation indicate a skyline system. All other units use ground-based logging systems.

@ Original Acres are based on size and shapes of units as they were originally prepared and presented to the public in February, 2004.

# Patch Percent Reduction: A reduction in unit size is expected during the timber sale layout phase due to unmapped riparian areas, patches with high amounts of live trees, and the need to retain patches of untreated areas in or near treated areas. This reduction will be at a minimum the amount recommended by snag emphasis level. These levels are:
1 = High Emphasis Level (25%), 2 = Moderate Emphasis Level (15%), 3 = Low Emphasis Level (0%)
Units less than or equal to 20 acres did not have a patch reduction objective.

Snag and Down Wood Management Proposals

A management strategy for retaining snags created before and during last year's wildland fires is a component of this alternative. Retention would emphasize the largest and highest quality snags that provide long-lasting wildlife habitat and other ecosystem functions. In the forest types found in the project area, these snags are typically western larch and Douglas-fir.

All live trees determined to have high probability of surviving the effects of the fire would be left on the site. The "Post-Fire Mortality Report" (Appendix E) would be applied to all units to aid in determining these trees. If felling of these trees were necessary for logging access or safety requirements, they would be left on site as downed wood material except in landing areas and skyline corridors.

High quality wildlife snags would be marked and signed within 200 feet of a road open to public wheeled motorized vehicles within the fire area, both inside and outside of a salvage unit. These trees are defined as larch, ponderosa pine, cottonwood, or Douglas-fir; typically larger diameter; and usually show signs of decay, broken tops, woodpecker use, other animal use, etc. In areas off-limits to firewood gathering under the permit requirements (Exhibit Rd-6), area closure signing would also occur (such as in streamside areas).

In addition to the live and dead retention trees described in the Features Common to All Action Alternatives in Chapter 2, most of the units in Alternative B would have dispersed larch and Douglas-fir trees and un-entered leave patches (Table 1-2). The minimum diameters for retention snags and the minimum percentages for un-entered leave patches vary by "snag emphasis levels." These emphasis levels were based on the size and shape of each proposed unit; size and shape of other proposed salvage units; occurrence over time of large larch and Douglas-fir in the unit; the amount of large-diameter larch and Douglas fir snags nearby; adjacent roads open to public motorized use; important movement corridors for wildlife; and burned-up, underburned, or unburned old growth. Every unit had a different combination of these factors. However, a typical "high" snag emphasis unit might have been surrounded by past regeneration harvest and had spruce old growth before the fire with few big larch or Douglas-fir trees, all of which were killed by the fire. A "moderate" snag emphasis unit could have a considerable amount of desirable snag habitat nearby, but be along a riparian corridor. All units or parts of units within 200 feet of open roads are included in the "low" emphasis level, because much of the dead wood left is expected to be removed as firewood. See Table 1-1 and Exhibit Rd-8 for detailed information about the snag and downed wood prescriptions by unit.

Table 1-2. Deadwood Habitat Prescriptions Specific to Alternative B. See Exhibit Rd-8 for details.

Element	Prescription by Snag Emphasis Level		
	High (1)	**Moderate (2)**	**Low (3)**
Western Larch Snags (≥ 10 feet tall and where safe to leave standing)	Beta and Ball Fires: ≥ 20" DBH Doe and Blackfoot Fires: ≥ 22" DBH	Beta Fire: ≥ 20" DBH Doe and Blackfoot Fires: ≥ 23" DBH Ball Fire: ≥ 21" DBH	Leave only if have broken tops, nest holes, or decay.
Douglas-fir Snags (≥ 10 feet tall and where safe to leave standing)	Beta Fire: ≥ 22" DBH Doe, Blackfoot, and Ball Fires: ≥ 25" DBH		
Units larger than 20 acres that were severely or moderately burned, OR had less than 4 larch or Douglas-fir per acre and low-severity fire. *	If necessary, add to the unentered leave patches (riparian areas, inoperable areas, etc.) to bring the total to at least 25% of the unit acreage.	If necessary, add to the unentered leave patches (riparian areas, inoperable areas, etc.) to bring the total to at least 15% of the unit acreage.	Additional reserve patch areas not required for snags.

* = Acreage and percentages are based on original Proposed Action unit size.

Table 1-2 shows the minimum diameters for dispersed retention trees, as well as the percentages of unit acreages in leave patches. Beschta et al. (1995) has recommended that at least 50% of dead trees in each size class be retained along with all trees over 20 inches DBH. As evidenced in Saab and Dudley (1998), this may not provide for the suite of cavity-nesting birds species that may invade a post-fire area. In a review of the Beschta recommendations, Everett (1995) indicated that the number and size of snags retained should be based on the natural range of variability, fire regime, and pre-fire species composition for the site. This is our approach for Alternative B (Exhibit Rd-3).

Stand exam data for large larch and Douglas-fir were examined to tease out the densities of snags that would result under various minimum retention diameters and patch sizes. The target density averaged across each of the Westside Fire Areas was seven per acre for stands

Figure 1-2

Figure 1-3

Figure 1-4

Figure 1-5

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with large Douglas-fir and western larch, which is expected to provide maximum densities of cavity-nesting birds over the rotation of the stands (Exhibit Rd-8). As shown in Table 1-2, the retention tree diameters would be higher in the Blackfoot and Doe Fires. This is due to the greater number of large trees existing in these fire areas. The number and density of remaining western larch snags would vary considerably between salvage units due to natural pre-fire variations in vegetation, stand site potential, burn severity, logging systems, and safety concerns.

Transportation Management Proposals

Transportation management proposals within the project area for Alternative B would involve temporary road construction, road maintenance, road and trail restrictions, and trail construction. Please refer to the Transportation Plan Maps, Figures 1-6 and 1-7. Please also refer to Figures 1-8 and 1-9 for the exiting transportation management situation (the No Action Alternative). More detailed color transportation plan maps for each alternative are available upon request.

Road Construction and Maintenance

- Approximately 4.0 miles of temporary road would be built for short term use; these temporary roads would be reclaimed after use. Each of the temporary roads to be constructed is located on a historic road template. No stream crossings would be necessary for all proposed road construction. The following table describes this road construction.

- Road maintenance actions consisting of brushing and blading may be needed on some haul roads within the project area. Other drainage work such as the placement of drain dips and additional culverts would likely take place. Dust abatement and blading would occur as needed on the main haul routes.

Table 1-3. Proposed Temporary Road Construction

Road Number	Area	Length	Units Accessed
9676	Beta Fire (Endor Creek)	3.2	12, 13S, 15H, 16, 17S
9842	Blackfoot Fire (Clayton Creek)	0.5	206H, 207S
9843	Blackfoot Fire (Clayton Creek)	0.1	207
547	Ball Fire (Sullivan Creek)	0.2	305
		Total: 4.0	

Road and Trail Restrictions

In 1995, Amendment 19 to the Flathead National Forest Plan established new forest-wide objectives and standards for grizzly bear security within the Forest to meet long-term conservation needs of this threatened species. Amendment 19 established short-term (5 years) and long-term (10 years) standards for open motorized access density, total motorized access

density and security core area, in areas known as grizzly bear management subunits. These five and ten-year standards are also contained in the "Terms and Conditions" of the biological opinion on the Flathead Forest Plan provided by the U.S. Fish and Wildlife Service. The five-year period has passed, and the ten-year period will be approaching next year. During the Amendment 19 planning process, the portion of the Flathead National Forest that occurred within the grizzly bear recovery zone (includes all of the Hungry Horse and Spotted Bear Ranger Districts) was subdivided into subunits that approximate the size of the home range for an adult female grizzly bear. The West Side Reservoir Fires affected six of these subunits, Ball Branch, Doris Lost Johnny, Jewel Basin Graves, Kah Soldier, Wheeler Quintonkon, and Wounded Buck Clayton (refer to Figures 1-6 and 1-7).

The six subunits mentioned above do not currently comply with the ten-year access density standards from Amendment 19 (refer to the table below). However, two standards in the Ball Branch subunit, total road density and security core, currently do meet the A19 standards. The figures in the table reflect conditions as they would be when required road decommissioning from the Spotted Beetle Decision Notice is completed.

Alternative B would modify travel management within the six grizzly bear subunits to meet or make progress toward meeting the ten-year standards from Amendment 19 while allowing for continued motorized access to some of the most popular areas on the west side of Hungry Horse Reservoir (refer to Table 1-5). Project-specific forest plan amendments would be prepared to amend the Forest Plan to different standards for open density and security core in the Doris Lost Johnny subunit, open density in the Wheeler Quintonkon subunit, and open and total density in the Wounded Buck Clayton subunit in the Record of Decision if this alternative is selected for implementation.

Yearlong road restrictions using gates, berms, and road decommissioning would reduce road densities for increased grizzly bear habitat security. Road decommissioning would include actions that would minimize the potential for future sedimentation of streams or noxious weed development. These actions would include placement of numerous waterbars, culvert removals, grass seeding, slash or debris placement on roads, planting shrubs, and/or physical alteration of the road template. Culvert removals and stream restoration would occur where roads to be decommissioned intersect streams. To reduce the amount of ground disturbed, cross-drain culverts would typically not be removed but waterbars would be placed nearby to ensure adequate drainage. The amount of physical altering of the road template from culvert removal or water bar creation would vary according to the sites involved. Berms would be placed at the beginning of decommissioned roads to effectively restrict wheeled motorized vehicle access.

Road decommissioning would involve ground-disturbing activities that have potential for noxious weed establishment. Disturbed sites would be seeded to speed revegetation of native plants and minimize potential for weed establishment. These activity locations would be noted on maintenance inventory plans for monitoring weed establishment. Noxious weed control activities would be consistent with the Flathead National Forest Weed Control Environmental Assessment and Decision Notice.

Figure 1-6

Figure 1-7

Figure 1-8

Figure 1-9

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Table 1-4: Comparison of Alternative B with the Existing Situation (Alternative A) and to Amendment 19 Standards

Grizzly Bear Subunit / A19 Standard	Existing Situation	Alternative B	A19 Standard (10 years)
Ball Branch			
Open Motorized Access Density*	20	12	≤ 19%
Total Motorized Access Density#	8	3	≤ 19%
Security Core @	76	82	≥ 68%
Doris Lost Johnny			
Open Motorized Access Density	60	44	≤ 19%
Total Motorized Access Density	22	16	≤ 19%
Security Core	31	55	≥ 68%
Jewel Basin Graves			
Open Motorized Access Density	22	19	≤ 19%
Total Motorized Access Density	24	19	≤ 19%
Security Core	56	68	≥ 68%
Kah Soldier			
Open Motorized Access Density	32	19	≤ 19%
Total Motorized Access Density	20	18	≤ 19%
Security Core	59	68	≥ 68%
Wheeler Quintonkon			
Open Motorized Access Density	29	25	≤ 19%
Total Motorized Access Density	25	19	≤ 19%
Security Core	54	68	≥ 68%
Wounded Buck Clayton			
Open Motorized Access Density	38	21	≤ 19%
Total Motorized Access Density	42	29	≤ 19%
Security Core	38	68	≥ 68%

* Open Motorized Access Density: percentage of area with less than **one** mile of road per square mile
# Total Motorized Access Density: percentage of area with less than **two** mile of road per square mile
@ Security Core: percentage of land area meeting security core conditions
Grey Cells: meets A19 standards

Funding for decommissioning may be from various resource areas, including transportation system maintenance, wildlife and fisheries enhancement, and Knudsen-Vanderburg (KV) funds from timber sale receipts.

All road mileages displayed in the following table are estimated from computer analysis. Actual miles affected during implementation may be slightly more or less than shown in the tables. However, road changes displayed on the maps in this DEIS would be implemented.

Trail Construction

Trail construction on Pioneer Ridge just north of Graves Bay is proposed to create a trail that directly accesses an open road thus eliminating the need to travel a section of closed road to reach the trailhead. Construction would be an extension of Trail 71 and consist of about 5000 feet of new trail. This proposed trail is shown on Figure 1-6.

Table 1-5: Alternative B Travel Management Status

Road and Trail Status	Existing Estimated Miles after Spotted Beetle Implementation	Total estimated miles after implementation of Alternative B
Open Yearlong	126 miles	97 miles
Open Seasonally	13 miles	23 miles
Closed Yearlong/Gate	106 miles	48 miles
Closed Yearlong/Berm	49 miles	85 miles
Closed Yearlong/Natural Revegetation	28 miles	23 miles
Closed Yearlong/Bridge Out	14 miles	14 miles
Decommissioned Roads (since 1995)*	37 miles	37 miles
Proposed to be Decommissioned	n/a	49 miles
Motorized Trails	105 miles	65 miles
Proposed New Non-Motorized Trails	n/a	1 mile

* all of these miles are accomplished or scheduled from the Spotted Beetle Decision Notice

Decision Framework

Given the purpose and need, the deciding official reviews the proposed action, the other alternatives, and the environmental consequences in order to make the following decisions after the publication of the Final EIS:

- Does the selected alternative meet the purpose and need for action?
- Should trees be salvaged to provide wood fiber for local communities?
- Should motorized vehicle access be changed, and if so, which roads should be closed or restricted?
- Does the selected alternative meet laws and regulations governing natural resource management activities?

The Responsible Official may choose any of the alternatives analyzed in this document, including the No Action alternative or some combination of elements of action alternatives, as long as they are within the range of effects of the alternatives that have been analyzed.

Public Involvement

Public participation helps the Forest Service identify concerns with possible effects of its proposals. It is also a means of disclosing to the public the nature and consequences of actions proposed for National Forest lands.

A public involvement strategy was developed to ensure that potentially interested members of the public and other government agencies received timely information about the upcoming analysis so they may participate in the process (Exhibit B-1a). The Forest Service developed a list of members of the public and agencies who may be interested in the West Side Reservoir project. This includes members of the public within these general categories:

- Adjacent landowners or residents
- Tribal governments
- County governments
- Local Congressional representatives
- Advocacy or user-group organizations
- Interested individuals and the general public
- Adjacent National Forests and Ranger Districts
- Other federal agencies
- Montana State agencies
- City governments
- Local economic organizations
- Timber industry groups
- Local news media

A Proposed Action was developed from a review of the fire areas by the Interdisciplinary Team. Public participation began in February 2004 when Hungry Horse District Ranger Jimmy DeHerrera and Spotted Bear District Ranger Deb Mucklow mailed a letter requesting comments on the Proposed Action to individuals, groups, and agencies identified from the above list. In addition, a legal notice was published in the *Daily Interlake* requesting comments and a press release was sent to local media. Eighty letters and e-mails were received in response to this mailing. In February, an open house was held at the WestCoast Kalispell Center Hotel and was attended by about seventy-seven members of the public. The majority of the people who attended the open house and/or submitted written comments expressed concerns about public access to National Forest System lands or concerns about the amount of timber salvage proposed.

The West Side Reservoir project first appeared in the Forest's Schedule of Proposed Actions (SOPA) in the spring of 2004. This project has appeared quarterly in the SOPA since that issue.

All comments received were considered, and a decision was made to produce an Environmental Impact Statement as the best level of analysis and documentation for the West Side Reservoir project. The Notice of Intent (NOI) was published in the Federal Register on February 3, 2004 (Exhibit B-16). The NOI asked for public comment on the proposal from February 5 to March 5. Many of the responses to the proposed action cited scientific literature and requested the IDT to consider this research. An attempt was made to locate and review this literature if IDT members were not already familiar with the research referenced and provide it to team specialists. The results of this literature search are provided in Exhibit C-82.

A list of agencies, groups, and individuals contacted or consulted throughout the entire public involvement process is in Chapter 4 of this DEIS. Participation with the Salish and Kootenai Tribe was conducted during quarterly meetings between tribal representatives and the Flathead National Forest Heritage Resource specialists.

The complete documentation of public participation and media coverage is contained in Exhibits B, C, and D.

Using the comments received, the IDT developed a list of issues to address.

Issues

An *issue* is defined as a point of discussion, debate, or dispute concerning environmental effects of an action. Issues are identified through the scoping process with the public and by review from other agencies and Forest Service personnel. The scoping process is used not only to identify important environmental issues, but also to identify and eliminate issues that do not pertain to the action, narrowing the scope of the environmental documentation process accordingly. Therefore, impacts are discussed in proportion to their importance.

To identify issues specific to the West Side Reservoir project, the IDT studied public comments and information about historic and current conditions within the analysis area. They also reviewed the Flathead National Forest Plan and other site-specific planning documents relevant to the West Side Reservoir area to further develop a list of issues. The Forest Service separated the issues into two groups: key and non-key issues. Key issues were defined as those directly or indirectly caused by implementing the proposed action. Non-key issues were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations explain this delineation in Sec. 1501.7, "…identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)…" Non-key issues identified in the content analysis of the public comments on the proposed action are located in Exhibit C-81. Comments key to the analysis process are categorized in Exhibit C-82.

As for key issues, the Forest Service identified the following during scoping. Some issues were used to fully develop all or a component of an alternative (Key Issues) and others were used to describe an alternative that was not considered in detail (Other Key Issues). The team also determined what *"issue indicators"* to use to measure how each fully developed alternative responded to identified issues.

Key Issues

1. Not Enough Snags are Being Left on the Landscape

Many comments were received stating snags should be retained in numbers over that in the proposed action to ensure that these wildlife habitat and ecosystem components are provided on the landscape over time. Concern expressed often centered on the amount of previous timber harvest activity that occurred on burned areas in the past and currently have very little snag habitat.

This issue is addressed through development of a project specific snag prescription that is a component of all action alternatives.

Issue Indicators:

- Average density of large larch and Douglas-fir after salvage across salvage units that support these trees, by fire area.
- Percent of each fire area with high densities of large larch and Douglas-fir after salvage.

2. Not Enough Snags are Proposed for Harvest

Many individuals and groups responding to the activities outlined in the Proposed Action felt snag retention should be less than proposed because snags are prevalent in other areas burned by the fires. Often they indicted snags were available for wildlife habitat in areas unavailable for timber harvest and in areas outside the project area, such as where fires burned in Glacier National Park or in the Bob Marshall Wilderness Area. Additionally, some responses asked the Forest Service to salvage the largest and most economically valuable snags and leave the smaller, damaged, and unsound snags for wildlife habitat.

This issue is addressed through development of a snag management prescription for Alternatives D and E that retains fewer snags than the Proposed Action. This prescription outlines smaller amounts of acreage dedicated to snag retention patches and larger diameter limits thus making more snags available for salvage.

Issue Indicators:

- Average density of large larch and Douglas-fir removed by salvage across salvage units that support these trees, by fire area.
- Percent of each fire area without high densities of large larch and Douglas-fir after salvage.

3. Not Enough of the Burned Areas are Being Salvage Logged

We received many comments from people asking why we identified only 6100 acres on which to salvage trees when over 30,000 acres burned on National Forest System lands. As a result of the relatively small amount of proposed acres for salvage, they thought the proposal does not provide enough economic income to the local economy because it does not salvage enough of the fire-affected areas (riparian areas, inventoried roadless areas, etc.).

This issue is addressed through development of alternatives D and E. Both of these alternatives proposed more acres of salvage than the proposed action.

Issue Indicators:

- Acres of salvage logging proposed.

4. Bark Beetle Management is not Adequately Addressed in the Proposed Action

Comments were received indicating the West Side Reservoir Fires have resulted in favorable habitat for bark beetles and other insects potentially resulting in large population increases that could kill some remaining live trees inside and outside fire perimeters. The concern was that the Forest Service was not doing enough to reduce the bark beetle populations and additional live trees not affected by the wildfires would later die to bark beetles.

This issue is addressed through a component of alternative D which employs trap trees and pheromone traps strategically located throughout the burn area.

Issue Indicators:

- Number of trap trees and pheromone traps used.

5. Grizzly Bear Security is not Adequately Addressed in the Proposed Action

The Proposed Action outlines an access management plan that makes progress toward meeting Forest Plan Amendment 19 (A19) road density and core area standards but does not fully meet them in all six of the bear management subunits within the project area. Many comments were received that stressed the project should fully meet A19 standards prior to salvage activities in order to provide adequate security for grizzly bears.

This issue is addressed through development of alternatives C and D that each fully meet A19 standards in all bear management subunits. The emphasis of Alternative C's access management plan is to provide as much wheeled motorized **trail** access as possible while meeting A19 standards. The emphasis of Alternative D's access management plan is to provide as much wheeled motorized **road** access as possible while meeting A19 standards.

Issue Indicators:

- Number of A19 component standards (security core, total road density, and open road density) met or exceeded across the six bear management subunits. There are a total of 18 of these components in the project area.

6. Bald Eagle Security and Big Game Winter Range Quality Need to be Emphasized

Some members of the public commented that the project should avoid activities that impact bald eagle nesting areas and big game winter range. Both of these wildlife management issues occur within the project area and near proposed activities.

This issue is addressed through development of Alternative C that includes exclusion of timber salvage activities in the vicinity of bald eagle nesting areas and big game winter range.

Issue Indicators:

- Acres of bald eagle habitat alteration within the nest site area.
- Acres of salvage in older Douglas-fir stands that burned at low or moderate intensity in known ungulate winter range.

7. Public Motorized Access is Reduced Too Much

One of the most common issues raised in the comments we received on the Proposed Action is the changes in access management reduce opportunities for motorized recreational and future management options too much. Of particular concern is the Beta Lake Road (895H) that offers unique high elevation fishing and spring bear hunting opportunities.

This issue is addressed through development of Alternative E that includes more open road access than the Proposed Action. This alternative, as well as the Proposed Action, would require project-specific Forest Plan amendments to allow higher open and total road densities, and lower security core area than currently specified by Forest Plan grizzly bear standards.

Issue Indicators:

- Miles of road closed to public wheeled motorized vehicles over the existing condition.

8. Water Quality Must Be Maintained or Improved

Comments were received that expressed concern that salvage harvest may result in increased sedimentation to project area streams. This would include Sullivan Creek, a water quality limited stream as identified on the 1996 Montana DEQ's 303(d) list and proposed as a category 2 in the draft 2004 303(d) list. Comments specifically included concerns that salvage harvest in or near riparian areas with high burn severities needed extra protection.

This issue is addressed through development of components of Alternative C that includes no harvest in riparian areas. This alternative also excludes timber salvage in areas in the Beta and Goldie Creek drainage that experienced particularly high burn severities, are located on steep slopes, and are positioned just outside the Beta and Goldie Creek Riparian Habitat Conservation Areas.

Issue Indicators:

- Acres of salvage harvest in riparian areas or areas of high burn severity and steep slopes near streams.

9. Possible Old Growth and "Recruitment" Old Growth Should Not be Salvage Logged

Comments were received expressing concern that all areas where the old growth status is uncertain due to the 2003 fires should not be salvaged. In addition, they felt that certain other areas would attain old growth characteristics more quickly and be of better habitat quality if left unsalvaged. Members of the public wanted the Forest Service to determine the status of these areas for their old growth and "recruitment old growth" characteristics and avoid logging if they still meet established criteria.

This issue is addressed through development of components of Alternative C that exclude salvage harvest in Douglas-fir or larch old growth that burned at low to moderate fire severity, but whose post-fire status is unknown. This alternative also excludes timber salvage in

Douglas-fir or larch stands that could soon be classified as old growth and that burned at low fire severity.

Issue Indicators:
- Acres of salvage harvest in pre-fire old growth with unknown post-fire status.
- Acres of salvage harvest in "recruitment old growth."

Other Key Issues

10. Burned-up Old Growth should not be Salvage Logged

Several comments were received indicating that areas identified as old growth prior to the wildland fire events in 2003 exhibit important ecological properties, no matter how severely they burned. These areas should not be salvage harvested.

11. Forest Plan Management Areas Unsuitable for Timber Management should not be Salvage Logged

A few individuals and groups ask the Forest Service to avoid salvage harvesting in areas that the Forest Plan has identified as not suitable for long-term timber management to protect the resource values associated with these management areas. Forest Plan Management Areas located within the fire perimeters and listed as unsuitable for long term timber management are Management Areas 2A, 2B, 2C, 3, 10, 12, 13A, and 19. Salvage harvest is allowed under Forest Plan standards as long as important resource values are maintained, protected, or enhanced. Please see Appendix B for descriptions of these Management Areas.

12. Rehabilitation of the Fire Areas Does Not Require Salvage Logging

Some people and groups asked us to consider rehabilitating and restoring the fire-affected areas with little to no salvage logging. They suggested the Forest Service could accomplish fire area recovery through such actions as road decommissioning, tree planting, and reducing sediment sources.

13. Fuels Reduction in the Burned Areas is Necessary to Reduce the Potential for Future Wildland Fires

A few groups and individuals were concerned about the potential for future wildland fire events if fuels reduction activities are not accomplished, both within the proposed harvest areas and outside these areas. They pointed out that "reburns" have been historically documented in fires like the ones that burned in 2003 and have the potential to create significant damage to the environment and human improvements.

14. Too Much Helicopter Yarding is Being Proposed

Many comments were received that indicated the proposal does not provide enough economic income to the local economy because it proposes too much helicopter logging, which is very expensive and requires contractors who do not employ local workers. The concern was also expressed that the material proposed for salvage would loose value quickly to deterioration and checking and would not be valuable enough to make helicopter yarding economically viable.

Scope of the Analysis

The proposed action is limited to the specific timber harvest, fuel treatments, reforestation activities, and road closures on national forest land in the West Side Reservoir analysis area, although the geographic extent of some areas used to analyze different components (watershed, old growth, and wildlife home ranges) may extend beyond the analysis area.

The analysis of effects disclosed in this document includes those occurring from the entire "scope" of the decision. Scope is defined in 40 CFR 1508.25 as the range of actions, alternatives, and impacts to be considered in an environmental impact statement. Any new information that develops after the Decision is made would be considered prior to implementation.

Types Of Actions Analyzed

Connected Actions - are those actions which are closely related and therefore should be discussed in the same environmental impact statement. Actions are connected if they:

- automatically trigger other actions which may require environmental analysis,
- cannot or will not proceed unless other actions are taken previously or simultaneously, or
- are independent parts of a larger action and depend on the larger actions for their justification.

The Proposed Action includes those activities necessary to fulfill the identified Purpose and Need as well as all connected actions identified in the alternatives described in Chapter 2. Connected actions include:

- √ Best Management Practices – 161 miles of roads in the project area are scheduled for culvert and other improvements to reduce drainage impacts to streams.
- √ Noxious weed control as outlined in the Flathead National Forest Noxious and Invasive Weed Control Environmental Assessment and Decision Notice will take place in the analysis area.

Cumulative Actions - are those actions, which when viewed with past actions, other present actions, and reasonably foreseeable actions, may have cumulatively significant impacts and therefore should be discussed in the same environmental analysis document. Past, present, and reasonably foreseeable actions are activities that have already occurred, are currently

occurring, or are likely to occur in the vicinity of the project area and may contribute cumulative effects. The past and present activities and natural events have contributed to creating the existing condition, as described in the Affected Environment sections of Chapter 3. These activities, as well as reasonably foreseeable activities, may produce environmental effects on issues or resources relevant to the proposal. Therefore, the past, present, and reasonably foreseeable activities have been considered in the cumulative effects analysis for each resource area.

- √ Wildland Fire Suppression – Since about 1929, wildland fires have been actively suppressed by the Forest Service and will continue to be suppressed. Suppression activities include hand and dozer line construction, use of chemical retardant, clearing for staging areas and helispots, and temporary use of closed roads.
- √ Noxious Weed Treatment – Weed treatments have been conducted by the Forest Service and Flathead County for many years. This activity will continue.
- √ Hunting, Fishing, Trapping – These activities have been and continue to be one of the most popular uses of National Forest System land.
- √ Firewood and Other Miscellaneous Forest Product Gathering – Other products include posts and poles, mushrooms, Pacific yew boughs, and Christmas trees.
- √ Snowmobiling – This activity will continue to occur. Snowmobiling is very popular in the project area.
- √ Camping/Boating – Campgrounds along Hungry Horse Reservoir will continue to be some of the most popular on the Forest. The reservoir will continue to receive a substantial amount of recreational boat use. Dispersed camping is nearly as popular and will continue.
- √ Driving, Motorized Trail Riding – Driving and sightseeing on open Forest roads will continue. Many trails in the project area have been and will continue to be open to motorcycles.
- √ Mountain Biking – This activity has occurred and will continue to occur on both trails and roadways.
- √ Hiking – Trails and roads provide quality hiking experiences.
- √ Road Maintenance – Roads open for motorized use by the public are maintained with safety as a high priority. Some roads have been closed and are maintained at a lower level.
- √ Trail Maintenance – Volunteers annually perform much of the trail maintenance on the Hungry Horse and Spotted Bear Ranger Districts.
- √ Heinrude Home Sites – An area of National Forest System (NFS) land adjacent to Hungry Horse Reservoir and near Quintonkon Creek is designated for private home sites. Nineteen home sites of approximately one-half acre each occupy the area. Fuels treatment on nearby NFS land has occurred in the past and may occur in the future.

- Past Actions only:

  - √ Timber Harvest – Many thousands of acres of timber has been harvested on National Forest System land since early in the last century. This harvesting has ranged from individual tree removals to complete clearcuts. The vast majority of these acres have regenerated into new forests.

- √ Road Construction – Several hundred miles of road have been built on federal land since the beginning of the last century.
- √ Trail Construction—Nearly all trail construction in the project area took place prior to 1990.
- √ Precommercial Thinning – Thousands of acres of sapling-sized stands have been thinned since the 1960s. Some of these stands originated from wildland fire and others from timber harvest activities.
- √ Fish Stocking – The streams and lakes of the project area have been stocked with non-native species of fish, most notably brook trout, for recreational purposes.
- √ Wildland Fire – There is evidence of extensive wildland fire in and near the project area over the last several hundred years. Despite suppression efforts, wildland fires are likely to continue to burn.
- √ Predator Control – Some predators, such as wolves and coyotes, were eradicated from the project area in the early part of the last century.
- √ Beaver Control – Trapping of beavers and destruction of beaver dams occurred up to the 1990s.
- √ Construction of Hungry Horse Dam – The dam construction and subsequent filling of Hungry Horse Reservoir in the 1950s has had a profound impact on the area.

- Present Actions only:

  - √ Post-Fire Mushroom Harvest – Commercial and personal use harvest of mushrooms is occurring in the burned environment. Some temporary road closures are associated with this activity.
  - √ Burned Area Emergency Restoration – BAER activities in the post-fire environment will be completed in 2004. Please refer to Exhibit E-2 for a description of activities.
  - √ Road-side and Trail-side Harvest of Hazard Trees – approximately 456 acres of commercial timber was removed near roads and trails for the purpose of protecting public safety. This harvest should be completed in 2004.
  - √ Reforestation of Burned Areas – Previous timber harvest areas that burned in 2003 may be planted with conifers. Several years to complete this activity may be needed.
  - √ Closures to Firewood Gathering – All areas burned in 2003 are currently closed to firewood gathering until timber salvage activities are completed.

- Reasonably Foreseeable Actions only:

  - √ Larch Heart Rot Research – A study designed to monitor the decay of western larch logs may take place in burned areas over the next several years.
  - √ High Mountain Lakes Fisheries Management – The Montana Department of Fish, Wildlife, and Parks and the Bonneville Power Administration have proposed to eradicate non-native fish species from lakes in the project area. Restocking these lakes with native cutthroat trout is likely.

Similar Actions are actions that have enough similarity in timing or geography as the Proposed Action that the effects of these similar actions should be considered in the same environmental analysis as the Proposed Action and its alternatives. This Proposed Action does not have any similar actions.

Types of Impacts Analyzed

The scope of the analysis includes consideration of three types of effects: *direct*, *indirect*, and *cumulative;* which are disclosed in Chapter 3 by resource affected. The definitions of these impacts or effects are contained in 40 CFR 1508.7 and 40 CFR 1508.8 and are restated below:

Direct Effects - are caused by the action and occur at the same time and place as the triggering action. Direct effects of the alternatives will be analyzed for the resources affected by the alternatives.

Indirect Effects - are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects of the alternatives will be analyzed for resources affected by the alternatives.

Cumulative Effects - are the impacts on the environment that result from the incremental impact (direct and indirect effects) of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7).

The scope of the analysis also includes the consideration of the No Action alternative and other reasonable alternatives as required in 40 CFR 1508.25(b). These alternatives are discussed in more detail in Chapter 2.