



**PARTNERSHIP STRATEGY
FOR THE
BEAVERHEAD-DEERLODGE NATIONAL FOREST**

Prepared for

Beaverhead-Deerlodge National Forest,
Montana Trout Unlimited,
Montana Wilderness Association,
National Wildlife Federation,
Pyramid Mountain Lumber,
RY Timber,
Roseburg Forest Products,
Smurfit-Stone Container,
and
Sun Mountain Lumber

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EXECUTIVE SUMMARY

A partnership of conservation and timber industry leaders (the Partnership) has collaborated in developing a strategy for managing the Beaverhead-Deerlodge National Forest (B-D). The Partnership Strategy fits within the USDA Forest Service's (USFS's) legal framework and effectively responds to many of the resource conflicts facing the agency. Because gridlock characterizes much of the USFS's management of the B-D, the Partnership urges the Forest to seriously consider adopting this new strategy. It is offered in good faith, is scientifically based, and responds to challenges posed by unnaturally high fire risk, robust outbreaks of forest insect infestations, growing illegal use of motorized vehicles, increased harm to at-risk species, and reduced ecosystem and watershed health.

The Partnership Strategy has been developed using USFS data and analysis tools. The objective has been to create a forest plan that provides greater predictability, diffuses conflict, and implements meaningful on-the-ground projects. The strategy identifies land use allocations, and defines forest standards for motorized and non-motorized recreation, transportation systems, timber harvest, fish and wildlife conservation, and restoration of damaged landscapes, and wilderness. The strategy recommends specific areas for possible Wilderness designation. The Partnership Strategy proposes that management occur at large landscape scales and that it be implemented using Stewardship Contracting, thereby producing revenue for localized restoration objectives.

The principles of the Partnership's Strategy include:

1. Large landscape projects involving vegetation management and associated restoration will occur under Stewardship Contracts.
2. Priority project areas will be landscapes dominated by existing road systems, at-risk streams, unnaturally fragmented vegetation patterns (from past patch cutting). One of the primary restoration goals will be to modify age class distribution to provide a more natural mix of wildlife habitat, reduce fires severity, and lessen the severity of insect outbreaks. Stewardship projects will favor large cutting units over many smaller, patch units.
3. The Partnership supports approximately 713,000 acres as "suitable" for timber production under Stewardship Contracts.
4. Project scale will generally occur at the 6th hydrologic unit code (HUC) scale, though this could be modified for smaller scales.
5. Stewardship restoration activities will occur on the ground within project landscapes. Such activities can include road obliterations, installation of road drainage, weed control, trail maintenance, fishery habitat enhancement, wildlife habitat enhancement burns, mitigation of grazing impacts, and improvement of trailhead facilities.

6. The intent of the B-D's Preferred Alternative 5—of prioritizing 72 “key watersheds” for protection and restoration—will be maintained.
7. Compliance with Inland Native Fish Strategy (INFISH) standards (Riparian Habitat Conservation Areas (RHCAs) and Riparian Management Objectives (RMOs)), as recommended in Alternative 5, will be required for stewardship projects.
8. A Stakeholder Advisory Council that includes representation from multiple interests will assist the USFS in the design, implementation, and monitoring of stewardship projects.
9. The Partnership recommends that the USFS endorse establishment of approximately 573,000 acres as Wilderness in 16 areas. The Partnership pledges to actively urge Congress to pass a bill formalizing these recommendations. The bill will include language to ensure implementation of the entirety of the Partnership Strategy.
10. The Partnership will ask Congress to fund landscape-scale National Environmental Policy Act (NEPA) analysis for stewardship projects as well as extend Stewardship Contracting authority.
11. The Partnership Strategy will result in a net decrease in permanent roads on the Forest at the end of the planning period.
12. The Forest standard for road densities will be no more than 1.5 linear miles per square mile. Progress toward the standard will be made incrementally and measured at the project scale.
13. New roads constructed during stewardship projects will be temporary roads. Temporary roads will be obliterated no more than five years after construction. New permanent roads will be constructed only if there is a demonstrated need for relocating an existing road that has been deemed harmful. In these instances, the road generally will be limited to accessing destinations previously available by road.
14. The access goal objective for stewardship projects occurring in portions of Inventoried Roadless Areas (IRAs) will involve the minimal economically feasible access tool necessary; roads will be limited to temporary roads. The post-project landscape in any portion of an IRA included in management under a stewardship project must maintain roadless values for ecosystem health, wildlife, fish, and recreation.
15. Post-harvest treatments generally will include burning that mimics natural fire and is allowed to burn beyond harvest units.
16. Proposed timber salvage projects on burned landscapes will occur only under the same principles of stewardship that are, required for suitable unburned landscapes. Fires will not be reason to enter landscapes deemed unsuitable except in wildland urban interface (WUI).

17. The Forest-wide off-highway vehicle (OHV) trail and road standard will be the Madison Ranger District standard—OHV use will be limited to routes designated in travel planning; motorized corridors off designated trails and roads will not be authorized, though dispersed camping or parking sites off the routes can be allowed if officially designated. A Forest standard will preclude motorized use within mountain goat wintering habitat.
18. The Partnership will be actively involved to assure that the USFS successfully implements all elements of this strategy.

1. INTRODUCTION

Since January 2006, the Partnership has been meeting to discuss the potential for collaboration on land management on the B-D. Representatives from the Montana Trout Unlimited, Montana Wilderness Association, National Wildlife Federation, and Sun Mountain Lumber have designed a land management approach they believe fits within the analysis framework of the Draft Environmental Impact Statement (DEIS) for the B-D's still-to-be-adopted Forest Plan.

The Partnership Strategy, which integrates policy and authority already available to the USFS could result in major advances on long-standing, controversial issues regarding forest management, imperiled fish and wildlife species, wilderness allocation, and motorized recreation. Principal elements in the strategy include treating large landscapes and retiring harmful and unneeded portions of the transportation system on lands deemed suitable for timber activities. The approach recommends lands with high wildland attributes for Congressional designation as wilderness. In addition, the Partnership's approach protects roadless values in most currently undeveloped areas while accommodating motorized use on significant portions of the Forest. The Partnership's approach expands the use of wildfire as a management tool, and increases fire protection of the private land interface on the Forest's boundary.

This document describes the Partnership's proposed approach in three sections. Following this Introduction, Section 2 discusses cornerstones of the underlying management paradigm and biological drivers behind the approach. Section 3 details modifications proposed for the B-D Preferred Alternative. Appendix A addresses the implementation approach through changes in descriptions of desired conditions, analysis of the management situation, specific objectives, standards, and guidelines. Appendix B contains maps of recommended land use allocations.

2. THEME

Create a Forest Plan that provides predictability and certainty, diffuses conflict, and focuses first and foremost on implementation.

Many deteriorated fish and wildlife habitats and streams with diminished water quality on the B-D are the result of a legacy of unnecessary roads. Impacts of the road system and patch timber harvests inherited from past land management illustrate the need for different forest management. Continuing past management practices threaten wildlands and offer few viable restoration opportunities. A management paradigm is needed to provide vegetative diversity in the B-D's disturbance-adapted forests, restore habitat, and reduce road density at the watershed scale to promote healthy ecosystems.

The Partnership's vision is simple: Adopt a plan that allocates 713,000 acres of the B-D for potential landscape-scale management, delineated as suitable for timber production. This allocation is designed to produce forest diversity and wood fiber to accomplish measurable habitat restoration using Stewardship Contracting. The overarching goal of this approach is to produce a diverse forest with far fewer roads while also generating a more predictable flow of wood products for local communities. Use of Stewardship Contracts for this management will help ensure that funding is available for restoration activities such as eliminating unneeded roads, correcting erosion sources, improving fish and wildlife populations, and better protecting key habitats from undue damage caused by other activities that occur on the Forest. Stewardship contracting will help ensure that local communities benefit economically from restored landscapes and a dependable timber supply. The portion of the Forest designated as unsuitable for timber activities, however, would be managed by relying principally on natural disturbances, mainly fire, to create diversity. Wildland fire use is more feasible as a tool if Forest perimeters have diverse vegetative conditions that are less susceptible to carrying wildfire to adjoining private lands.

2.1 STEWARDSHIP CONTRACTING

Stewardship implies that land management should be sustainable. In some cases, however, sustainability is threatened by well-intended past activities that have left behind unhealthy landscapes. Examples of conditions on the Forest that harm sustainability are road systems that bleed sediment into streams, damaged riparian areas that no longer provide shade or pool-forming woody material beneficial to fish, transportation systems so dense they provide little security for big game, and thick understories of young trees that can increase wildfire intensity in important forest stands. Left alone, many of these conditions would not self-correct for generations.

The USFS's traditional strategy of depending on appropriated funding to accomplish large-scale restoration of damaged forest conditions has largely fallen short. Similarly, depending on appropriations

for maintaining extensive road systems also has been a poor strategy. The federal General Accounting Office estimates the National Forest System is currently saddled with a maintenance backlog that could cost \$8 billion. Faced with rapidly increasing national debt, Congress is unlikely to appropriate increased road maintenance or restoration funding in the foreseeable future. Therefore roads will continue to deteriorate and the identified restoration needs will not be accomplished.

The USFS has experience in using Stewardship Contracting to successfully exchange forest products for services that improve Forest ecosystem health and the public's enjoyment of national forests. In addition, Stewardship Contracting can provide local communities with economic benefits. The value of commodities produced from Stewardship Contracts is exchanged for services that achieve the USFS's priorities for non-commodity objectives on the same landscape. This allows the value of raw materials removed and sent to local mills to be reinvested locally by using local contractors. This program benefits the ecosystem and infrastructure of a national forest, while also multiplying benefits to local communities (Castillo, 2006).

When instituted as a standard way of doing business, Stewardship Contracting can generate local jobs and result in a trained restoration workforce for future contracting opportunities.

Stewardship contracted activities benefit local communities socially and economically through active restoration of forests and by producing commodities. This allows local communities to better re-connect with the B-D.

Congressional authority for Stewardship Contracting expires in 2014. If the authority isn't renewed, the B-D should retain to the extent feasible the application of stewardship principles in managing the Forest.

2.2 DISTURBANCE ECOLOGY

For the most part, the B-D DEIS accurately portrayed the Forest's disturbance ecology. The Forest has excellent research information on fire severities and fire return intervals across the Forest (Barrett, 1997; Losensky, 2002). For the forested portion of the B-D, we can describe historic conditions by the Forest's two major cover types:

1. **Mid-elevation, droughty Douglas-fir**—Wildfires within this cover type range from frequent and nonlethal to less frequent and of mixed severity. In a natural condition, stands were typically open, single-storied, and had a savannah-like appearance. Understory development was usually present in patches between natural events but "came and went" with each wildfire. Eastside Douglas-fir is capable of living several hundred years, so some of the individuals within these stands were quite old.

The density of those older trees was usually quite low. Aspen clones often were associated with scattered stands of Douglas-fir.

2. **Mid-to-high elevation lodgepole pine/subalpine fir/spruce**—Wildfires within this cover type were relatively infrequent (occurring approximately every 35 years) and of mixed severity. A typical fire would have burned at “stand-replacing” severity within some stands, while other stands would have burned at a lower severity, leaving some surviving trees and others that would have been missed altogether. This created a “ragged, irregular” pattern on the landscape. Losensky (2002) described the fire history of the Trail Creek area as having an uninterrupted fire interval of approximately 35 years dating back to around 1720. As a result, lodgepole pine stands and the occasional subalpine fir/spruce stand tended to be either single-storied (resulting from the more severe, stand-replacing fires), or two-storied (resulting from the mixed-severity fires from which scattered overstory trees survived). The mix of stands tended to be quite young (0 to 80 years). Lodgepole pine is generally a short-lived species and usually succumbs under natural conditions to insects or fire well before reaching the century mark. Interestingly, Losensky (2002) found scattered individual lodgepole pine up to 280 years old that had survived multiple wildfires (evidenced by fire scars). Such older trees occurred at very low densities (usually averaging fewer than one tree per acre). Such trees, while rare, were important for goshawks and other large-tree-dependent species on the B-D (Kirkley, 2000; Hillis et al., 2002).

The B-D DEIS described current conditions adequately based on a mix of Forest Inventory and Analysis (FIA), satellite imagery, and timber inventory data. Again, these findings were generally consistent with analysis provided by consultants for the Partnership’s timber interests. In summary, the Partnership consultant’s findings indicate:

1. **Mid-elevation Douglas-fir stands** are substantially denser and more structurally complex than historic conditions due to long-term fire suppression. These conditions will result in the loss of the scattered large Douglas-fir trees currently present on the landscape. Aspen stands have largely disappeared and occur at a single-digit percentage of past coverage.
2. **Mid-to-high elevation lodgepole pine/subalpine fir/spruce stands** are substantially older and denser than they have ever been within the last millennia, based on published fire scar or climatic data. Those outcomes have not been measurably affected by timber harvest at the scale at which timber harvest has occurred on the B-D (i.e. while timber harvest reduced the age class distribution within a few scattered locales, it did not occur at a scale that measurably altered the effects of fire suppression). Fire severity predictions based on increased fuel loadings, combined with the effects of drought, insect outbreaks, and global warming, anecdotally suggest that fires will be substantially larger and more severe than anything we have witnessed in the past century.

Wildlife and fish species are generally fire-adapted and in many cases fire-dependent. Thus, having larger-than-normal and higher-severity-than-normal fires does not necessarily mean that wildlife species are at severe risk. Many species, however, will suffer losses in habitat due to anticipated changes in fire size and severity. For instance, Canada lynx are dependent on dense, seedling-sapling stands that occur after wildfires (Ruediger et al., 2000). Frequent, moderate-severity fires provide a continuum of habitat across the landscape. Large, severe fires in the near future will recruit a lot of lynx foraging habitat, but those “boom” conditions will be followed by a long period of “bust” conditions, because once larger-than-normal fires burn, they likely won’t burn again for another century. Black-backed woodpeckers are another fire-dependent species that typically increase substantially after wildfires. Again, having larger and higher-severity fires will create a short-term pulse of good habitat followed by a long period of very poor habitat. Retaining a mix of natural disturbances at normal intervals provides better wildlife habitat than shutting down those disturbances by fire suppression.

Clearly, the B-D needs to develop a strategy for allowing more fires to burn. Unfortunately, because of private land development and increased fuel loadings on public lands, most fires will not be allowed to burn at a severity that will have much effect, especially within moist habitats such as riparian areas. Natural disturbances can be mimicked using combinations of prescribed burning, slashing, or logging. Logging designed to mimic natural disturbances has little resemblance to logging done in the 1970s. To make logging comparable to natural disturbances, the following factors must be incorporated into the design: (1) The scale at which logging is done must be substantially larger than it was in the 1970s to create natural fire patterns; (2) project design should favor large harvest units instead of multiple smaller, fragmented patches; (3) more material (standing dead trees, standing green trees, downed logs) must be left behind to provide the habitat niches typical of post-burn conditions; and (4) landscapes need to be accessed largely without the construction of permanent roads to provide the security needed by some animals, particularly large ungulates and carnivores, and to minimize risks to aquatic species.

2.3 RESTORATION

2.3.1 Restoration Emphasis

Commercial logging on National Forest lands has occurred since the creation of the USFS in 1905. Large-scale logging, however, did not start until after World War II. This management extended into the late 1980s, maximized timber yield, and employed a high density of permanent roads. This strategy eventually accommodated the Wilderness Act of 1964, National Environmental Policy Act of 1969, Endangered Species Act of 1973, and National Forest Management Act of 1976. By about 1989, the USFS began abandoning the strategy for various reasons, including the following:

1. The strategy didn't provide for viability of many wildlife and fish species;
2. The road network couldn't be maintained with available funds; and
3. Perhaps most importantly, a large portion of the public rejected a timber-first approach and expected the agency to place a higher priority on clean water, wildlife, fish, and recreation.

By the early 1990s, the USFS developed a new timber harvest strategy given various labels including "sustainable ecosystems" and, most recently, "ecosystem management." The key components of this strategy include the following:

1. Natural processes like fire and insects are an essential and inevitable part of the system;
2. Vegetative objectives should consider historic conditions and natural processes as reference points;
3. Treatments should mimic natural patterns, processes, and structural conditions;
4. Timber harvested should be more of a "by-product" of maintaining healthy forests rather than an end in itself;
5. Timber harvest should be considered a funding vehicle to restore landscapes damaged by past management.

2.4 WILDERNESS

Few national forests in the West have as many high-quality potential wilderness areas as the B-D. The B-D Plan must recommend areas it proposes for future wilderness legislation. The Partnership strategy identifies 16 recommended areas in Section 3.2.

2.5 MOTORIZED USE IN ROADLESS AREAS

The Partnership recommends that travel planning that engages the public be the instrument for allowing or restricting recreational motorized use to designated routes consistent with the intent of Alternative 5, except where areas are recommended for Wilderness or in mountain goat winter habitat. The Partnership recommends that areas proposed in Alternative 5 as non-motorized primitive or semiprimitive remain free of motorized recreation use. Some semiprimitive areas, depending on completion of travel management plans, could be open for winter motorized use. Use of motorized machinery necessary for stewardship activities or for pre-existing commercial uses could be authorized through contract stipulations and special use permits.

3. MODIFICATIONS TO PREFERRED ALTERNATIVE

3.1 RESTORATION STRATEGY

Restoration needs on the B-D fall within the following priorities: (1) Remove excess permanent roads, particularly those that compromise fisheries values or ungulate and grizzly bear security; (2) restore more natural patterns to landscapes fragmented by past logging; (3) modify fuels along the Forest periphery so wildfires can be allowed to play a more natural role; (4) modify age class distribution to provide a more natural mix of wildlife habitat, reduce fire severity, and lessen the severity of insect outbreaks; (5) improve aquatic habitat using tools that help achieve measurable Riparian Management Objectives (RMOs) and water quality, especially in Key Watersheds; (6) enhance recreational resources currently inadequately funded, such as trail and trailhead maintenance; (7) reduce the impacts of invasive species; and (8) keep commercial timber management as an economically viable tool for land management use and as an economic base for small, Western communities.

1. **Remove permanent roads.** A high percentage of the B-D is unroaded. Unfortunately, portions of the most important watersheds have 3—6 miles of roads per square mile. These road networks reduce security for large game, fragment important populations of native fish, restrict stream and floodplain function, and provide multiple delivery points of sediment to streams. While the B-D recognizes a need to remove many of these roads, the funds available for road reclamation have been only a tiny fraction of the amount needed. At current rates, relying on capital investment dollars to remove roads will take many decades. Conversely, timber harvest occurring under Stewardship Contracting provides a funding vehicle that can result in those roads being permanently removed much more rapidly.
2. **Restore more natural patterns.** Previously logged areas on the B-D are typically a patchwork of small clearcuts and uncut stands. While such areas will eventually burn, restoring a more natural pattern, the pattern can be immediately restored to historic patterns using timber harvest and prescribed burning. When combined with permanent road eradication, such areas can quickly recover to provide less habitat fragmentation and improved ungulate security or interior forest conditions for species such as pine martens.
3. **Modify fuels along the Forest periphery.** The B-D intends to allow wildfire to play a more natural role. The agency strategy, termed “Wildland Fire Use,” unfortunately cannot succeed because too much of the B-D has dense, multi-storied stands of lodgepole pine or Douglas-fir adjoining private land. This virtually assures that the USFS will attempt to suppress most wildfires. The primary management tool of Alternative 5 is prescribed burning. Prescribed burning of existing stands will likely fail in most situations because agency caution will dictate burning occur only when conditions

are fairly wet. Further, the agency will not manage for fire escape outside well-defined, rigid boundaries. Instead, the Partnership proposes more aggressive timber harvest, which reduces fuels along the Forest periphery to better allow firefighters or prescribed burning crews to “take a stand” with reasonable risk along private land boundaries.

4. **Modify age class diversity to reduce fire and insect severity.** Given the inevitability of severe fires, insufficient time exists to substantially reduce the risk on a Forest-wide basis. Carefully designed timber harvest, however, can reduce the severity of fires in key areas. For instance, Douglas-fir stands that contain large, older trees can be logged to remove the understory so that those older trees are more likely to survive severe fires. Landscapes with good potential for lynx habitat can be managed to recruit foraging habitat in a more predictable and sustainable manner than by merely waiting for the next fire. Municipal watersheds with a high level of bark beetle outbreak can be logged to reduce the severity of subsequent wildfires on water quality. Mapping of recent insect infestations of unprecedented scale on the B-D provide evidence that landscape vegetative treatments are appropriate to restore age class diversity of forested lands.
5. **Improve aquatic habitats to achieve RMOs and water quality, especially in Key Watersheds.** Fishery health, especially native species, is generally a good indicator of the condition of many aquatic habitats. On the B-D, key native trout species include bull trout, a federally listed threatened species, west of the Divide; westslope cutthroat trout, a candidate for listing, on both sides of the Divide; and fluvial arctic grayling, likely to be listed in 2007, in the Big Hole watershed (just off Forest) and in the upper Ruby River watershed (a restoration population on Forest). Populations of all three species are but a fraction of historical numbers (Shepard, 2002; FWP, 1999; Montana Bull Trout Restoration Team, 2000; USFWS, 1998; Fluvial Arctic Grayling Recovery Workgroup, 2001). Habitat degradation—including fragmentation and sediment impacts caused by road systems—has harmed all three species. Moreover, grayling in the Big Hole River depend on cold, sustainable water from the B-D. In addition, hybridization and competition from introduced species has been harmful to cutthroat trout. Riparian habitat and stream restoration funded through stewardship projects can help the USFS meet the measurable RMOs and water quality goals detailed in the Draft Forest Plan. Achieving RMOs, especially in Key Watersheds, will benefit native species, thereby stabilizing or increasing populations. Among other benefits, this could obviate the need for ESA requirements that constrain Forest activities in the future.
6. **Enhance recreation resources currently inadequately funded.** Stewardship Contracting at the landscape level enables the USFS to inventory and fund needed improvements to recreational assets, including trails, trailhead facilities, interpretative features, and other items the public uses on national forests.

7. **Reduce the impact of invasive species.** Stewardship projects can generate revenue needed to help curb the spread of invasive weeds. In addition, the reduction of the Forest's expansive road network will help reduce vectors for weed spread. Increased attention to curbing invasive weeds complements county, state, and private efforts to do the same on adjacent lands.
8. **Retain timber management as a viable management tool.** Recognize its economic importance to small, Western communities. For sawmills and the logging industry to remain viable, a sustainable level of wood needs to be available annually. Currently, insect infestations have reached epidemic proportions, and the trend is likely to continue, as will larger, more severe wildfires. Most citizens would rather see this wood harvested, as long as it is done in a cost-effective and environmentally responsible fashion. The Partnership has identified those lands where timber production can be used as a management tool, using cost-efficient means to accomplish work and meet goals consistent with the preceding restoration principles (1 through 7). The Partnership estimates that 1% of the Partnership-recommended suitable timber base can be treated annually with silvicultural prescriptions that accomplish proposed restoration principles.
9. **Use of Stewardship Contracting.** Within Congressional authority, new projects on the B-D can be designed for implementation under Stewardship Contracts to ensure that funding is available for restoration activities. This approach provides much more certainty that funding will be available to achieve a spectrum of management objectives in landscape-level projects. In the event that Stewardship Contracting authorization does not continue through the expected life of the Forest Plan, the Partnership recommends that the B-D craft the document so it includes commitments ensuring that project design and financing enable restoration accomplishments commensurate with vegetation management.

3.2 WILDERNESS STRATEGY

This plan proposes 18 areas of recommended Wilderness that would add approximately 573,000 acres to the 225,000 acres of existing Wilderness. The areas recommended in this strategy have high wilderness attribute scores, and almost all of them have been included in previous Congressional wilderness proposals. Seventeen specific wildland areas of the B-D have been included as Wilderness in statewide legislation passed by the U.S. House and/or Senate¹ since the 1987 forest plans were completed. Passage of Wilderness legislation would ensure protection of these areas and resolve long-standing debate about their future.

¹ MT Congressional Wilderness: Stony Mountain, Quigg Peak, Sapphires, Flints, East Fork, and One Hundred Acre Meadow Additions to Anaconda Pintler Wilderness, Storm Lake Addition to Anaconda Pintler Wilderness, North Big Hole Additions to Anaconda-Pintler Wilderness, West Big Hole, West Pioneers, East Pioneers, Italian Peaks, Cowboys Heaven Addition to Lee Metcalf Wilderness, Electric Peak, Tobacco Roots, Mount Jefferson, and Snowcrest Range.

Table 3.2-1 Recommended Wilderness Summary

Area Name	Partnership Recommended Wilderness Acres	BDNF Alternative 5 Recommended Wilderness Acres
Anaconda-Pintler Additions -Rock Creek -East Pintler -North Big Hole	50,622	25,094
Cowboy's Heaven/Lee Metcalf Additions*	17,811	18,452
East Pioneers (Torrey Mountain)	87,527	74,157
Electric Peak	11,584	11,190
Garfield Mountain (Lima Peaks)	42,083	Not recommended
Highlands	20,393	Not recommended
Italian Peaks*	29,522	25,561
Lost Cabin Lake	5,220	Not recommended
Mount Jefferson*	4,488	4,485
Quigg Peak (Slide Rock)	9,341	3,476
Ross Fork (Sapphires)	48,103	Not recommended
Snowcrest Range*	86,833	86,839
Stony Mountain	17,661	Not recommended
West Big Hole	92,795	Not recommended
West Flint/Dolus	15,286	Not recommended
West Pioneers	34,349	Not recommended
Total	573,619	249,254

*Marked areas are the same as Alternative 5 boundaries. Discrepancies in acreage are due to removal of private inholdings from Partnership-recommended wilderness calculations and differences in ERG and BDNF acreage calculation methods.

Few forests have so many high-attribute, potential wilderness areas as the B-D. Across the Forest, these premier wildlands provide vital wildlife habitat, ensure water quality and quantity, and offer world-class backcountry hunting, fishing, and hiking opportunities. Formal wilderness designation reflects national commitment and an enduring legacy for Montanans. The B-D Plan must identify suitable areas it recommends for future wilderness legislation.

The Partnership Strategy proposes specific changes that would strengthen Wilderness recommendations to conserve backcountry areas with high wilderness attributes, wildlife, fisheries, upper watersheds, unique cultural and geological features, high natural integrity, and outstanding opportunities for outdoor recreation.

3.2.1 Rock Creek Headwaters–Pintler Ranger District

3.2.1.1 *Stony Mountain*

USFS Wilderness Capability Rating: 27

The proposed change matches the Stony Mountain Recommended Wilderness on the Lolo National Forest. This area includes key mountain goat ranges, wolverine natal denning habitat, and excellent elk country with large and healthy herds as well as goshawks, pine marten, moose, black bear, lion, and gray wolves. Tributary streams sustain the blue-ribbon trout waters of Rock Creek.

Stony Mountain has been included repeatedly in Wilderness legislation since the (Deerlodge) Forest Plan was completed. Boundaries omit a groomed snowmobile route along Skalkaho Road and lower-elevation lands suitable for stewardship-timber.

3.2.1.2 *Quigg Peak (Slide Rock)*

USFS Wilderness Capability Rating: 30

This area complements a larger proposed wilderness for Quigg Peak on the Lolo National Forest and adds to the proposal made by the B-D in Alternative 5. The additions strengthen the core of the larger Quigg Peak area by providing practical boundaries, protecting key headwaters, and including important backcountry trails.

As an integral part of the Rock Creek wildlands complex, the Quigg Peak area conserves key habitat for goshawk, pine marten, fisher, bobcat, cougar, and black bear, and protects vital headwaters for the blue-ribbon trout waters of Rock Creek.

Portions of the Quigg Peak area have been included in nine Wilderness bills introduced or passed by Congress since 1984.

3.2.1.3 *Ross Fork (Sapphires)*

USFS Wilderness Capability Rating: 30

The proposal includes two core areas within the Sapphires Wilderness Study Area (WSA): the Upper Ross Fork and Sapphire WSA lands adjoining the Anaconda-Pintler Wilderness.

The Ross Fork-Sapphires addition includes a fine system of primitive nonmotorized and wilderness portal trails; habitat for bighorn sheep, mountain goats, and wolverine; and excellent elk habitat and traditional

backcountry hunting. Two Research Natural Areas (RNA) and various Salish cultural and religious sites are at the head of the Ross Fork.

Portions of the Sapphires WSA have been included in statewide Wilderness legislation passed by Congress. The area recommended for Wilderness is managed as Management Area (MA) A4 Nonmotorized Backcountry under the 1987 Deerlodge Forest Plan.

Remaining Wilderness study lands (including Sapphire Crest Trail) between Signal Rock and Skalkaho Pass would be managed as Primitive Nonmotorized. Several thousand acres south and east of Ross Fork, including parts of Meyers Creek, would be managed for stewardship-timber. Frogpond Basin would be accessible by road and motor vehicle.

3.2.1.4 *Rock Creek Additions to Anaconda-Pintler Wilderness*

USFS Wilderness Capability Rating: 18

A series of modest boundary changes totaling 6,637 acres would include portions of adjoining IRAs with wilderness values. The boundary changes protect native trout fisheries, mountain goat habitats, wilderness portals, and scenic integrity.

Rock Creek Additions were included in legislation passed by the House and Senate.

Excluded roadless lands north of Carpp Creek and Hundred Acre Meadow would be managed for stewardship timber and semiprimitive snowmobile recreation.

3.2.1.5 *East Pintler Addition to Anaconda-Pintler Wilderness*

USFS Wilderness Capability Rating: 29

In Alternative 5, the B-D failed to account for wildlands recently acquired as part of the “Watershed Project.” The revised East Pintler Addition straddles 5 miles of the Continental Divide with 33 mountain lakes, six peaks over 10,000 feet, nine peaks over 9,000 feet, one RNA, and pure stands of subalpine larch. The proposal includes excellent habitat for mountain goat, bighorn sheep, elk (summer and fall), moose, marten, and wolverine denning, as well as elk calving areas. Cutthroat trout streams and lakes add to outstanding opportunities for wilderness hunting, hiking, horse packing, climbing, skiing, and primitive recreation.

Roughly 6,000 acres were private when the 1987 Forest Plan was completed. Adjoining lands are Recommended Wilderness and A4 Nonmotorized Management. Improved trailhead facilities, trail maintenance/reclamation, and weed control would be desirable here.

3.2.1.6 *West Flint/Dolus*

USFS Wilderness Capability Rating: 27

The majestic Flints rise more than a mile above the Clark Fork River. The existing Forest Plan manages the Flints backcountry to provide a mix of nonmotorized and motorized recreation. The proposed change elevates two distinct primitive nonmotorized tracts to recommended wilderness (total acres 15,286). Other areas would continue to be available for semiprimitive motorized recreation.

A Flint Creek/Dolus Wilderness was included in five of five Montana Wilderness bills that passed the House and/or Senate.

3.2.2 Big Hole River Landscape–Wisdom and Wise River Ranger Districts

3.2.2.1 *North Big Hole Addition to Anaconda-Pintler Wilderness*

USFS Wilderness Capability Rating: 25–32

The B-D proposed these areas for recommended Wilderness in Alternative 5, and boundary adjustments augment the draft proposal by adding mountain goat ranges along the Continental Divide; clear, cold trout and grayling waters feeding the Big Hole River; elk calving areas; and wilderness portal trails, including the Continental Divide National Scenic Trail.

Lower-elevation Forest lands would be available for stewardship-timber, fuel reduction, and limited motorized recreation. The North Big Hole addition was included in five of five Montana Wilderness bills passed by the House and Senate.

3.2.2.2 *West Big Hole*

USFS Wilderness Capability Rating: 29

Framing the sunset side of the fabled Big Hole River Valley, the snow-clad 10,000-plus foot peaks of the Beaverhead Mountains tower over rugged glacial cirques, mountain lakes, and a dozen willow-lined tributaries of the Upper Big Hole River. The area includes excellent habitat for mountain goat, moose, wolverine, black bear, marten, and elk. Thirty miles of the Continental Divide National Scenic Trail traverse the high country.

The West Big Hole Wilderness was included in five of five Montana Wilderness bills passed by the U.S. House and/or Senate. The West Big Hole is recommended for Wilderness under the current Forest Plan, which pledges to protect its “outstanding wilderness characteristics...until Congress determines

otherwise.” In recent years, powerful new snow machines have initiated “highmarking” in violation of Forest Plan prescription for recommended Wilderness.

The proposal would retain the West Big Hole as a Forest Plan Wilderness recommendation in the rugged interior, with lower elevation lands managed for stewardship-contracted timber.

3.2.3 Pioneer Mountains

3.2.3.1 *West Pioneers*

USFS Wilderness Capability Rating: 27

A 34,000-acre core—roughly one-fifth of the West Pioneers Wilderness Study Area and one-eighth of inventoried roadless—is recommended for Wilderness. This area extends from 9,400-foot Odell Mountain north to Stone Lakes and Upper Pettengil Creek, protecting core mountain goat winter ranges along the Pioneers Divide; wolverine denning habitat; moose habitat; and legendary elk habitat, including calving areas, wallows, and traditional fall backcountry hunting areas. Native cutthroat fisheries are in Stone Creek. Excellent backcountry fishing exists in high country lakes.

Eighty percent of the West Pioneers WSA and adjoining roadless areas would be classed as semiprimitive motorized, providing approximately 200,000 backcountry acres for winter snowmobiling. Lower elevation lands (outside the WSA) would be available for stewardship-timber.

Proposed boundaries closely follow the West Pioneers Wilderness included in statewide Wilderness legislation passed by Congress in 1988.

3.2.3.2 *East Pioneers (Torrey Mountain)*

USFS Wilderness Capability Rating: 28

Steep, rugged, and strikingly beautiful, this recommended Wilderness includes massive granite walls and 11,000-plus foot peaks, which are among the highest in Montana. This area includes 30 mountain lakes and an excellent system of backcountry trails.

The proposal includes minor boundary changes to the proposal made by the B-D in Alternative 5 to include key mountain goat winter ranges and protect pure westslope cutthroat and a northern addition surrounding Black Lion Mountain.

The East Pioneers Wilderness was included in every Montana bill passed by the House and/or Senate since the 1987 Forest Plan.

3.2.4 Continental Divide–Southwest Montana–Dillon Ranger District

3.2.4.1 Italian Peaks

USFS Wilderness Capability Rating: 24–33

The Italian Peaks area lies in the remote and arid extreme southwest corner of the state, and much of the area is blanketed in high-elevation grassland with occasional islands of forest on cooler, north-facing slopes. As such, it is an elk hunter's paradise, and hunting is the dominant use of the area. Grizzly bears migrating out of Yellowstone Park and the Centennial Valley likely use the Italian Peaks and nearby Lima Peaks roadless areas as corridors to the vast central Idaho wildlands.

The B-D proposed this area for recommended Wilderness in Alternative 5. Minor boundary changes have been made to that proposal to delete the jeep road into the Girl Scout Camp at Deadman Lake and extend the northern boundary along the Continental Divide to Morrison Lake.

Portions of the area have been included in eight bills introduced or passed by Congress from 1984 to 1992.

3.2.4.2 Garfield Mountain (Lima Peaks)

USFS Wilderness Capability Rating: 27

The Continental Divide twists upward here from high parks, sagebrush-grasslands, and aspen groves. Together with Italian Peaks, 60 stunning miles of the Continental Divide National Scenic Trail would be protected as well as fossils, archeological sites, and excellent habitat for mountain goats, elk, wolverine, and antelope.

Most of the area is managed for traditional nonmotorized recreation. Boundaries exclude patented claims and private lands at lower elevations.

3.2.5 Continental Divide (North)

3.2.5.1 Electric Peak

USFS Wilderness Capability Rating: 30

The B-D proposed this area for recommended Wilderness in Alternative 5, and minor boundary changes have been made to make some lower-elevation lands available for stewardship-timber and to better protect key wildlife habitat. This proposal complements a proposed Wilderness on the Helena National Forest and protects an area known for its rich wildlife habitat (elk, black bear, cougar, and mountain lion)

and high nonmotorized recreational values. The Electric Peak-Little Blackfoot Meadows was included in five of five statewide bills passed by the House and Senate since the existing Forest Plan was written.

3.2.5.2 Highlands

USFS Wilderness Capability Rating: 26

These towering, 10,000 foot-plus peaks on the Continental Divide provide a stunning backdrop to Butte. Mountain goats and bighorn sheep roam the rugged divide as well as elk, moose, and deer. The Highlands has the highest Wilderness Capability Rating of any area near Butte, providing excellent solitude, natural integrity, and primitive recreation. More than 30 archeological sites have been identified in this area.

The B-D proposed to manage the Highlands as primitive nonmotorized backcountry in Alternative 5, and this proposal elevates the area to Recommended Wilderness. Mineral potential is rated as moderate; existing mining claims may carry pre-existing rights likely to be validated in any future legislation.

The Highlands has not previously been included in Montana Wilderness legislation.

3.2.5.3 Lost Cabin Lake

USFS Wilderness Capability Rating: 32

This small but highly scenic area in the rugged Tobacco Roots is a primitive nonmotorized area with two stunning lake basins, fine trails, mountain goat habitat, and excellent Wilderness attributes. The proposed change elevates the Lost Cabin Lake area to recommended Wilderness.

The Tobacco Roots were previously included in legislation passed by the House.

3.2.6 Greater Yellowstone

3.2.6.1 Snowcrest Range

USFS Wilderness Capability Rating: 38

The B-D proposed this area for Recommended Wilderness in Alternative 5, and the Partnership Strategy also includes this recommendation. Magnificent mountain peaks stretching from Snowcrest Mountain south to Sawtooth Mountain and Antone Peak tower above expansive meadows bordered by aspen groves, stunted conifers, and sagebrush. The diversity of habitats provides excellent homes for black bear, golden eagle, mountain lion, mule deer, antelope, and elk. This is a sportsman's paradise, with abundant game and birds, superb hunting, and good trout fishing. As headwaters of the Ruby River, the Snowcrest Range supplies cold, clean water for irrigation and trout fisheries downstream.

3.2.6.2 *Cowboy's Heaven/Lee Metcalf Wilderness Additions*

USFS Wilderness Capability Rating: 32—34

Cowboy's Heaven sits between Beartrap Canyon and the Spanish Peaks unit of the Lee Metcalf Wilderness. A mix of open grassland parks and forests, this area is a wildlife haven, home to elk, black bear, moose, mountain lion, and wolverine. Hunting, horseback riding, camping, fishing, and hiking are all popular in this area.

Several other small additions to the Lee Metcalf Wilderness serve to strengthen the integrity of this important anchor for wildlife and fisheries.

3.2.6.3 *Mount Jefferson*

USFS Wilderness Capability Rating: 35

The most distant tributary of the Missouri River, Hell-Roaring Creek, begins its 3,941-mile journey to the ocean in this U-shaped canyon wrapped by the Continental Divide. The mountain waters pour off the Divide to feed myriad lakes and springs in the neighboring Red Rock Lakes National Wildlife Refuge. Mt. Jefferson, an integral part of the Centennials wildlands complex, is excellent grizzly, moose, and elk habitat. It is part of a key wildlife migration corridor linking the Greater Yellowstone wildlife populations to wildlands in the Snowcrest, Gravellies, and west along the Continental Divide. The BLM has recommended Wilderness for roadless lands adjoining Mt. Jefferson on the west. The primary traditional uses include hunting, hiking, fishing, and horseback travel. The B-D also has proposed this area for recommended Wilderness in Alternative 5.

3.3 WILDLIFE STRATEGY

3.3.1 Management Indicator Species

The recommended DEIS Management Indicator Species (MIS), wolverine (natal den habitat) and mayfly, are reasonably representative indicators for species requiring alpine habitats with an absence of disturbance during late winter/spring or species that need cold, clean water with healthy riparian vegetation. Unfortunately, neither MIS are necessarily representative enough as indicators of the changes in forest age classes and stand structures documented in the DEIS. Forests on the B-D are substantially older and denser than normal and thus more prone to large fire disturbance. Furthermore, neither species is indicative of declines in security for ungulates or wide-ranging carnivores, while mayflies are not indicators of one of the biggest impacts to aquatic communities: road culverts that impede fish and amphibian movement and thus fragment populations. We recommend the B-D acknowledge in the Plan

the limitations of using mayflies as an MIS species. While they can be used to monitor water quality, they are not suitable indicators for road culverts that impede fish and amphibian movements and fragment populations.

When logging and/or prescribed burning are used to modify forest stand age classes, the most contentious aspect of such treatments is how they affect species dependent on large trees or mature forests. The B-D has been successfully challenged on that very issue (e.g. Grasshopper Creek). However, based on multiple analyses, the B-D has more mature forests than historically occurred. Furthermore, broad-scale analyses and population occupancy and production research (Kirkley, 2000; Hillis et al., 2003; Hillis and Lockman, 2002) suggest that mature forest-dependent species like northern goshawks and American marten are doing very well at both the Forest and Regional scales. Therefore, it is possible to increase the harvest of mature forest stands and still maintain populations of species dependent large trees or mature forest at historical levels.

The Partnership suggests adding the northern goshawk as an MIS. Normally, using the goshawk as an MIS would not be appropriate because high monitoring costs (i.e. new nests are difficult and expensive to locate). The B-D, however, is in a unique situation because of the emphasis Dr. Jack Kirkley at Western Montana College/University of Montana has placed on researching and monitoring goshawks. Essentially, the B-D has received a tremendous amount of goshawk monitoring data without cost. The B-D currently has a wealth of inventoried nest territories, making monitoring of nest activity and fledgling success relatively inexpensive.

The goshawk could be monitored using the following hierarchy, which is fully compatible with the Region One Species Viability Protocol (Samson et al., 2004):

1. Potential nesting habitat defined as stands greater than 9 inches diameter at breast height (dbh) would be inventoried via FIA data and compared against the HRV at the large HUC5 scale (roughly homologous to the 11 landscapes on the B-D).
2. Distribution of nest habitat within mid-scales (HUC6) would be found via satellite imagery; the limitations and errors inherent in those data would be recognized and compared against the HRV at the mid-scale. (Project-level data would not be monitored, since representative levels of mature forest would not be effectively detected at this scale.)
3. Goshawk nest locations would be compiled based on Western Montana College data to ensure that nest selection for given timber stands was consistent with the research, that total nest density within the sampled area was consistent with published nest densities based on territoriality, and that fledgling success was consistent with the research. In the event Western Montana College staff no

longer monitored nest territories, B-D staff would monitor ten known nesting territories for nest activity and fledgling success at five-year intervals.

3.3.2 Mountain Goat

The B-D landscapes include a very small percentage of land considered to be mountain goat habitat. This may be less than 1% of the public land within these landscapes. Typically, these habitats are the most rugged terrain, consisting of rocky peaks, crags, cirque headwalls, and bedrock outcrops. During portions of the year, goats may graze adjacent cirque basins and grassy meadows. They rarely venture more than a few hundred yards from the more rugged habitats that offer security.

During winter, suitable habitat shrinks to those very small habitat niches that are sufficiently windswept to expose forage or are within the lee of prevailing winds or under overhanging cliffs where goats can escape wind chill and minimize energy expenditure. Energy conservation is essential to surviving long winters.

A very limited amount of suitable and potential connected habitat is available for goats. The inability of goats to casually move from one locale to another, unlike all other ungulates, greatly limits their potential habitat.

Goats are strongly habituated to their home ranges. This behavior is reinforced by the discontinuity of suitable habitat separated by large expanses of unsuitable habitat avoided by goats. Therefore, extirpation of an isolated population, an event often associated in the past with over-hunting, may take decades or more to be re-colonized by goats.

Controlling human use in mountain goat habitat is essential to allow goats to utilize favorable habitats and to avoid potentially fatal excessive energy expenditures. Some evidence exists that summer goat populations choose habitats away from mountain lakes, where human use is most frequent. Winter use, however, has much more potential to have adverse impacts, as suitable winter habitat is much more restrictive and because the inability of goats to use the most desirable habitat occurs during the most stressful period of the year. In addition, energy expenditure to escape human disturbance during winter can be expected to result in reduced winter survival, especially for young-of-the-year kids.

Therefore, we would propose a Plan standard as follows:

Winter recreation uses, both motorized and non-motorized, will be prohibited within ½ mile of known existing or historic mountain goat winter habitat. New summer use facilities or permitted uses, such as trails or outfitter camps, would be located to avoid key summer goat habitats.

3.3.3 Sage Grouse

The B-D manages the most important intermountain shrub-steppe habitats in USFS Region 1, importance reflected by the high level of plant and animal diversity found there. Great Basin species such as the sage sparrow, pygmy rabbit, and great basin pocket mouse are found almost nowhere else in Montana. Species such as the greater sage-grouse (*Centrocercus urophasianus*) and sage thrasher are found there in high abundance. Many of the region's big game populations, particularly antelope and mule deer, winter in shrub-steppe habitats, exploiting high-protein big sagebrush (*Artemisia spp.*) browse exposed above-snow during even extreme winters.

Sage-grouse are obligates of sagebrush for winter forage and springtime nesting cover at the landscape level. They also depend upon a rich understory of native grasses and forbs to sustain reproductive success throughout the summer months. They also are documented to require vast landscapes for population sustainability. As such, the species serves as an excellent indicator of landscape health in terms of broader sagebrush community extent and successional stage, as well as locally regarding herbaceous community composition, health, and structure. These vegetation community conditions are germane to such BDNF management issues as wildland fire, fuels management, non-native plant invasion, evergreen tree encroachment, livestock grazing, riparian health, energy development and infrastructure, and even travel management—all factors discussed at length in the draft plan.

The Partnership recommends that the B-D designate the sage grouse as an MIS, representing sagebrush-dependent species. Furthermore, the Partnership recommends the B-D incorporate the nine sage grouse guidelines developed by the Western Association of Fish and Wildlife Agencies. Lastly, the Partnership recommends that the B-D adopt the following standard: Prescribed burning and grazing activities will not be initiated within extensive sagebrush/grassland habitats when in conflict with the sage grouse guidelines. Specific recommended sage grouse standards and guidelines are located in the standards and guideline comments (Section 4.2).

Under guidelines developed by the Western Association of Fish and Wildlife Agencies, the B-D will monitor sage grouse as an MIS and maintain and improve sage-grouse habitats.

3.4 WATERSHED/FISHERIES STRATEGY

3.4.1 Scientific Findings

1. Native fish are adapted to survive infrequent, large burns (i.e. “pulse” events) when drainages are healthy and well-connected.

2. Sediment from roads and logging adversely affects fish when it occurs as a continual, point-source-impact (i.e. “press” events); sediment chokes spawning gravels and reduces depth of pools, which are crucial as overwinter habitat and summer refugia.
3. Most existing road networks are not “fish friendly.” Problems include the following:
 - a. Roads densities are excessive, resulting in large erosion-prone areas of bare mineral soil;
 - b. Culverts are undersized, too steep, or may not provide fish passage, thereby isolating populations of native fish;
 - c. Roads are often within Riparian Habitat Conservation Areas (RHCAs), thereby reducing floodplain function, channel migration, and recruitment of woody material;
 - d. Stream crossings are not “beaver friendly” (i.e. designed to pass debris);
 - e. Maintenance has been largely inadequate;
 - f. Road surfacing and road drainage has been minimal;
 - g. Special treatment of roads on sensitive soils has been inadequate; and
 - h. Road cuts can intercept surface and near-surface ground water and direct these waters more rapidly towards an active channel, thus increasing peak flows and diminishing non-peak flows.
4. While sediment from logging (felling, skidding, fuels treatment) can be significant at the source, the sediment generated from roads, culverts, and stream crossings is more likely to have negative impacts.
5. Large, severe fires within drainages that have been previously impacted by high-density, poorly designed roads and that, as a result, have low abundances of native fish can complicate recovery of fragmented native fish populations.
6. Restoring damaged watersheds via road removal, relocation, or road improvement generates some short-term sediment. Such impacts, however, can be acceptable if they result in benefits to long-term watershed function.
7. Watersheds without recent natural or man-caused disturbances leave older and denser forests more vulnerable to insect epidemics and/or stand-replacing fires than would be expected to occur naturally.

3.4.2 Assumptions

1. Restoring watershed health by relying on appropriated investment dollars will take a very long time or may not occur due to reduced federal budgets. Before federal appropriations are available to fix watersheds, some drainages could experience large and intense burns due to the aging of forests and accumulation of fuels from fire exclusion.

2. Carefully designed timber harvest within impacted watersheds using Stewardship Contracting can provide a funding vehicle to restore watersheds.
3. Populations of native fluvial arctic grayling in the main stem of the Big Hole River and its tributaries have been limited by available water and high stream temperatures. Dependable cold flows from the B-D will continue to be key to the recovery of Big Hole grayling as well as of blue-ribbon trout fisheries in other rivers such as the Madison and Beaverhead, as well as Rock Creek. Stewardship projects in LaMarche, Fishtrap, Deep Creek, and other Big Hole drainages must be specifically designed to ensure maintenance or improvement of desirable water temperatures and streamflow regimes for grayling.

3.4.3 “Fisheries and Stream Friendly” Timber Harvest Direction

1. Net permanent road densities will decline (measured at the HUC6).
2. New roads will generally be temporary (prism is re-contoured and reforested). Some flexibility for new permanent roads might be necessary as long as net road density decreases.
3. Permanent roads (prism remains in place) will be reconstructed and drained to standards that will minimally impact the watershed.
4. Yearlong closed permanent roads generally will be restored to a “zero maintenance required” status, which means revegetating the surface, providing adequate drainage, and removing stream crossing structures.
5. New or replaced crossings will be designed to provide unimpeded fish passage after fishery genetic considerations have been evaluated. Culverts will be designed to pass 100-year flow events and, within beaver habitat, will be “beaver friendly” (i.e. beaver dams pose no threat to the road or crossing structure and hence require no maintenance). Where impossible to provide for unimpeded fish passage or beaver dams, the drainage structure and approach fills will be removed after harvest entry.
6. Logging will be designed to minimize sediment delivery to adjacent streams (and may include dry season logging, winter logging on frozen ground, use of cut-to-length harvest, forwarders, etc.). No timber harvest will occur in RHCA's unless stipulated, as required by INFISH standards, after site-specific analysis by USFS hydrologists and fisheries biologists.

7. All new or replaced stream crossings will be designed to accommodate 100-year events and desired fish passage for all life stages of native species.
8. New road closures will favor entrance re-contouring and stream crossing removal as alternatives to gates.
9. Roads constructed or used in timber harvest and to be retained for administrative or public use as permanent roads shall incorporate drainage and surfacing recommended by USFS and State of Montana BMPs for soil type, grade, and expected uses.
10. Timber harvest aimed as watershed restoration shall be packaged using Stewardship Contracting to assure that funding is available for accomplishing restoration objectives at the time of the project.
11. Stewardship projects shall incorporate project design and legal closures to assure that timber harvest areas or closed skid trails and roads are not used by off-road vehicles.
12. Timber harvest stewardship projects shall be designed so that they include restoration elements that help achieve INFISH Riparian Management Objectives within a time period identified in project planning. Project level locations will emphasize restoration opportunities of previously harvested landscapes with inclusion of adjacent undeveloped areas as appropriate to accomplish landscape-scale treatment and to achieve an objective that both eliminates the need to re-enter the area for at least 80 years and minimizes the need for permanent roads.
13. While lands may be deemed timber “suitable,” the emphasis behind standards and guidelines are for roaded and roadless stewardship.
14. Projects will be designed with a goal of no-net loss of conservation populations of cutthroat trout. A conservation population is defined as being less than 10% genetically introgressed. Projects will pose minimal anticipated risk to populations of cutthroat trout that are 100% pure and to identified core and nodal habitat of bull trout. Project goals will include measures that seek to increase abundance and distribution of native fish. This can occur by reducing population fragmentation and improving habitat and water quality measures under RMOs.
15. New timber harvest projects need OHVs restricted to designated routes to assure that restoration objectives can be achieved.
16. Stewardship logging can occur after unplanned events such as wildfire, insect epidemics, or large blowdown, but it would occur only on lands designated as suitable for timber stewardship

management or where public safety, property, or facilities were at foreseeable risk (i.e., campgrounds, trailheads, etc.).

3.5 ROAD POLICY

3.5.1 Road Density Targets

Old paradigm for permanent road density—Timber harvest entries in the late 1960s and 1970s were based on the assumption that permanent roads would be constructed and maintained at approximately 1000-foot intervals to provide access to every forest stand. This resulted in road densities of 4—6 miles of road per square mile. Road densities for lands historically designated as suitable timber lands were calculated for the B-D (Table 3.5.1). These calculations do not include wilderness, IRAs, or private inholdings. Note that 38% of these lands (sum of columns 3-7) have road densities greater than 2 miles of road per square mile.

Table 3.5.1 Acres of road-accessed lands by road density category

Road density	Miles per Square Mile						
	0-1	1-2	2-3	3-4	4-5	5-6	6+
Acres	429,551	381,539	276,117	151,568	45,332	14,427	8,845
% of total	33	29	21	12	3	1	1

Why high permanent road densities are not compatible with fisheries, animal security, or maintenance needs. High-density permanent roads are often large sources of sediment and the cause of harmful population fragmentation in native fisheries in the northern Rockies. Security for elk, a condition which is critical to maintaining long, relatively unregulated hunting seasons, is severely compromised when road densities exceed 2 miles of road per section. Lastly, funding for maintaining roads has fallen well short of the actual needs, and the availability of those funds is expected to decline further.

New paradigm—USFS timber harvest strategies changed with the adoption of ecosystem management in the 1990s. The new strategy recognizes that forests can be managed with less social conflict and more cheaply with temporary roads than with permanent roads. The Partnership’s definition of a temporary road applies for the duration of a vegetation management project; after the project is complete the prism is removed and the surface is recontoured and seeded. In general, all new roads will be temporary. The density of permanent roads, including those open, closed, or revegetated (with prism retained), will be reduced to no greater than 1.5 miles/square mile. For details, please see Aquatic Standards 1—4 in Appendix A.

How this standard fits on the B-D—On lands historically allocated as suitable timber lands, the permanent road network is generally in place. Within every HUC6 with permanent roads, roads are

currently available for accessing important destinations such as campgrounds, trailheads, fishing streams, lakes, hunting areas, and firewood harvesting sites. Also available are roads that provide simple “driving for pleasure.” Many of the permanent roads, however, are parallel systems that degrade the scenery, compromise wildlife and fishery habitat, and provide little if any additional access. Under the Partnership’s standard, approximately 733 square miles of national forest would retain approximately 1,500 miles of permanent road. Determination of which roads would be removed or retained would be based on detailed, project-level analysis.

3.5.2 Road Restoration and Maintenance

Road mileage on the B-D will be lessened to reduce adverse effects to wildlife, fish, recreation, range and forest road maintenance budgets. Destination roads would be favored for retention while single-purpose roads generally would be removed as vegetation treatment of a project area is completed. Restoration generally will favor removing timber management roads through recontouring, removing of drainage structures, and revegetation. A very limited amount of road decommissioning would involve partial recontouring, scarification, and removal of drainage structures—but only where a foreseeable use of a road segment is anticipated to treat an adjacent area. Road maintenance will include appropriate structures for fish passage and road drainage.

3.6 INVENTORIED ROADLESS AREAS

All IRAs will be managed to retain their roadless values. The Partnership recognizes that portions of some IRAs currently include primitive roads and user-created motorized routes. Some of these IRAs have been allocated in the B-D’s Preferred Alternative as semiprimitive non-motorized. The Partnership supports implementation of this Recreation Opportunity Spectrum (ROS) classification on the selected IRAs. However, management guidance must accommodate temporary access for mechanized harvest to harvest and remove timber in portions of roadless areas included in stewardship projects. Construction of temporary roads may be authorized if non-road options for harvest and removal are not feasible. Implementation of stewardship projects that include managing vegetation in portions of some roadless areas designated as suitable for timber management will occur only if long-term roadless values are retained by removing all timber access routes upon project completion.

IRAs not recommended for wilderness or managed with an ROS of semiprimitive or primitive non-motorized can be considered for snowmobile use and/or OHV route designation upon completion of travel plans.

3.6.1 Potential Wilderness

The Partnership has identified 18 areas totaling 573,000 acres with high wilderness attributes that we recommend be conveyed as recommended Wilderness in the Revised Forest Plan.

3.6.2 Timber Suitable

The Partnership has identified approximately 713,000 acres as appropriate for timber production under stewardship principles. Most of these areas have had some level of previous timber harvest and accompanying roads. Priority for treatment would be (1) reentries of disturbed landscapes to reduce road densities, (2) management for vegetative diversity by creating of mosaics of naturally occurring vegetation patterns and patch sizes, and (3) landscapes with high potential for future insect epidemics and/or stand-replacing fire. To accomplish these objectives, an average of 1% of the suitable timberland will be treated annually, measured on a decadal basis.

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The undersigned endorse this document:

Bruce Farling, Montana Trout Unlimited

Date

Tim Baker, Montana Wilderness Association

Date

Tom France, National Wildlife Federation

Date

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Date

**APPENDIX A:
SPECIFIC CHANGES TO DRAFT PLAN**

APPENDIX B:

MAPS