This booklet is a collaborative product of the **Montana Forest Restoration Working Group**, *which is comprised of the following individuals:*

Julia Altemus,
Montana Logging Association

Debbie Austin,
U.S. Forest Service

Len Broberg,
Sierra Club

Dave Bull,
U.S. Forest Service

Caroline Byrd,
The Nature Conservancy

Al Christophersen,
Rocky Mountain Elk Foundation

Tony Colter,
Sun Mountain Lumber

Marnie Criley,
Wildlands CPR

Orville Daniels,
Retired U.S. Forest Service

Bob Ekey,
The Wilderness Society

Ellen Engstedt,
Montana Wood Products Assoc.

Pat Flowers,
MT Dept of Fish, Wildlife & Parks

Rick Franke,
Smurfit-Stone Container

Pam Gardiner,
U.S. Forest Service

John Gatchell,
Montana Wilderness Association

William Geer,
Theodore Roosevelt Conservation Partnership

Dave Harmon,
Backcountry Horsemen

continued on backpage

Restoring Montana's National Forest Lands

Guiding Principles and Recommended Implementation

September 2007
Third Edition

INTRODUCTION
"Building a Zone of Agreement"

We humans tend to focus on our differences rather than our similarities. Many of our political institutions function on that basis. Election campaigns stress real and invented differences between candidates; 51% of the vote wins, and receives 100% of the representation. After public hearings, resource agencies often decide for one side, or the other, or their own side. And in court, you win or lose.

Differences of opinion about national forest stewardship and the "winner take all" structures have led to decades of polarization among our citizenry and near paralysis on the ground. Over time, responsible people on many sides of forest issues have concluded the present system was failing – failing our timber workers and timber-dependent communities, failing the ecological health of our forests, and failing our responsibility to future generations. That left a question: Despite our differences, could key parties come to the table to see if there was a "zone of agreement" we share, a common ground set of ideas we could build on to generate positive work on the ground?

In August 2006 Artemis Common Ground invited nine people from industry, the conservation community, the U.S. Forest Service, the State of Montana, and the nonprofit sector to explore this question. After an all-day meeting, everyone concluded that common ground might be created around the idea of on-the-ground restoration: work to restore the health of our national forests.

The group formed a Steering Committee whose mission was to engage more community interests in an effort to develop Restoration Principles and an action plan to have them implemented on the ground.

In January 2007 thirty-four representatives of conservationists, motorized users, outfitters, loggers, mill operators, state government and the Forest Service met at Lubrecht Experimental Forest for discussions facilitated by the National Forest Foundation. All present agreed the restoration goal was worth pursuing; they agreed to work by consensus (meaning that everyone had to agree before a proposal was accepted); they set August 1 as the deadline to finish their work; and they all personally committed to help get the job done.

The group contained long-time adversaries, and the effort was not easy. Success depended on honesty, the ability to listen and to disagree respectfully, and, most centrally, on learning how to focus on building the "zone of agreement." To do that, a person must be able to step for a moment into another person's shoes and think of what approach might work for both people.

In such a process, loggers do not become environmental activists and conservationists do not change into timber mill managers. People retain their different perspectives, but they develop the ability to say, "We disagree on these issues over there. But we can agree on this specific point. Let's start with that, and see if we can broaden

areas of agreement, and if successful, figure out a better way to make good things happen on the ground."

That is what the Montana Forest Restoration Working Group did.

At their last meeting on August 1, 2007, all recommendations were given final, unanimous approval. Next, the group agreed to change its name to the *Montana Forest Restoration Committee* (MFRC), reflecting its new mission to see that the approved Restoration Principles and Implementation Plan are put into practice.

Finally, members of the group were asked if they wanted to continue to be involved in the effort by serving on the new MFRC. Every person in the room raised their hand.

The materials that follow reflect the integrity, commitment and honorable work of all those people. The job before all of us now is to work together to achieve good restoration work on the ground.

Montana Forest Restoration Working Group
(MFRWG)

PREFACE

The Montana Forest Restoration Working Group consists of the following list of diverse interests participating since January 30, 2007 in the crafting of Restoration Principles and steps to implement them.

The Principles include a Preamble, which provides an overarching umbrella to guide the use and interpretation of the Principles.

To be effective, these Principles must be implemented on the ground. The MFRWG Implementation Plan is designed to facilitate early, constructive engagement of diverse community interests, to develop broad public support and to accomplish more work on the ground in a timely manner.

CONVENORS: National Forest Foundation

Artemis Common Ground

PARTICIPANTS:

NAME	REPRESENTING
	Sierra Club - Montana Chapter
Sam Hamilton	Forest Service - Northern Region
Al Christopherson	Rocky Mountain Elk Foundation
Mike Volesky	Office of the Governor
	Smurfit-Stone Container
Dale Harris	Over the Bun Stray Group
	Theodore Roosevelt Conservation Partnership
Lucia Rider	Forest Service Northern Region
Bobby Ebey	The Wilderness Society
Mark Vander Meer	The National Network of Forest Practitioners
	Wildlands CPR
	WildWest Institute
Cyrille L. Daniels	At Large
	Lolo National Forest
	Montana Wilderness Association
	Sun Mountain Lumber Co.
	Kootenai River Development Council, Inc.
	Hill-Shelter Logs & Lumber Co.
	Seeley Lake Ranger District, Lolo Nat'l Forest
	Montana Logging Association
	Bitterroot Mountain Lumber, Inc.
	Montana Wood Products Assn
	Montana Dept. of Natural Resources
David Hanson	Back Country Horsemen of Missoula
	Montana Fish, Wildlife and Parks
	Bitterroot National Forest
	The Nature Conservancy of Montana
	Rich Ranches

MONTANA FOREST RESTORATION PRINCIPLES

Background

Restoration of forest ecosystems is an attempt to rejuvenate and recover natural structure, function, and process in a landscape context. Although it is clear that complete restoration of an ecosystem cannot be achieved through discrete projects applied individually on the landscape, the process of restoration can be conducted with a flexible and open approach that allows for the improvement in the natural condition, form and function in the landscape and places the ecosystem on a more natural trajectory. The purpose of this document is to summarize the efforts of the Montana Forest Restoration Working Group and put forth a set of principles that might help guide the restoration process in Montana. Furthermore, as important as the development of a meaningful set of restoration principles is the collective and collaborative process taken to arrive at an agreeable set of principles. The following list of 13 restoration principles reflects a distillation of approximately 60 restoration vision categories and restoration attributes. All 13 of these restoration principles fall under the assumption that restoration is conducted to accelerate the recovery of ecological processes and to enhance societal and economic well being. Restoration does not preclude future active management; in fact, it may enhance future options. Restoration activities shall be conducted under the principles of adaptive management.

Preamble

Through restoration principles we seek to articulate a collective vision of ecologically appropriate, scientifically supported forest restoration. Scientifically credible principles and criteria provide a yardstick with which to evaluate proposed forest restoration policies and projects. By including social criteria, the restoration principles also help strengthen the connection between what is good for the forest and what is good for the communities and the general public. We advocate integrating science with community participation in restoration on the assumption that successful ecosystem restoration must address ecological, economic, and social needs, including community vitality. A locally- or regionally-based restoration work force is an essential component for the implementation of our principles.

Restoration principles provide a transparent and verifiable on-the-ground approach to guide and evaluate the effectiveness of restoration projects, programs, and policies. They can be used to guide restoration assessments that are conducted at multiple spatial scales, using methodologies and criteria for adaptive management through monitoring and evaluation of restoration projects.

These principles recognize that restoration projects may have adverse short-term impacts that are acceptable when they support long-term benefits. These principles for restoration should be used as guidelines for project development, as they represent the "zone of agreement" where controversy, delays, appeals, and litigation are significantly reduced. Projects using these principles should be driven primarily by ecological objectives, be economically feasible, and promote economic and social benefits.

As evident in the following principles, restoration projects are an investment in the future with multiple benefits. Not all restoration projects will have commercial value. Where commercial products are present, they should be utilized to help offset project costs. Since not all restoration projects can be funded by the sale of products, increased restoration funding from governmental and nongovernmental sources is essential to accomplishing restoration goals. In order to maintain broad public support for projects characterized by the Forest Service as restoration projects, such projects must be prioritized and designed to implement the principles contained in this document

Restoration Principles

The following principles should be applied when planning and executing all forest restoration work on national forest lands in Montana. Projects should adhere to all applicable principles. Parties working on restoration projects should:

1) Restore functioning ecosystems by enhancing ecological processes: Restore ecosystems and biotic composition to achieve ecological integrity through recovery of species diversity, water quality and quantity, soil quality and function, terrestrial and aquatic habitats, and resilience. Project design will utilize adaptive management, recognizing the dynamic character of ecosystems and the unpredictability of the future. Active and Passive Management strategies (see Appendix A for definitions) will be used to attain desired ecosystem objectives and future conditions.

2) Apply adaptive management approach: Restoration will be conducted through adaptive management that includes assessment, project design, implementation, research and monitoring. Adaptive management is an approach to natural resource policy that embodies a simple imperative: actions are experiments; learn from them. The process does not necessarily follow a specific pattern, but rather is dynamic and responds to inputs and outcomes at any point along the way (see Figure 1).

3) Use the appropriate scale of integrated analysis to prioritize and design restoration activities: Use landscape, watershed and project level ecosystem analysis in both prioritization and design of projects unless a compelling reason to omit a level of analysis is present. While economic feasibility is essential to project implementation, priorities should be based on ecological considerations and not be influenced by funding projections..

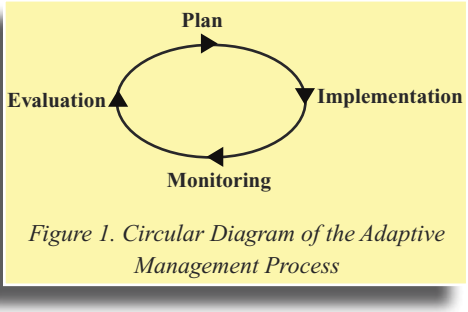


Figure 1. Circular Diagram of the Adaptive Management Process

4) Monitor restoration outcomes: Monitoring is essential for determining the effectiveness of implemented restoration projects. Baseline measurements, project monitoring, and the incorporation of research complete the information feedback loop used in future project design. Monitoring must be conducted at multiple scales.

5) Reestablish fire as a natural process on the landscape: Reestablishment of natural fire regimes may be accomplished through Passive or Active Management. Passive Management allows for natural processes to take place by not suppressing natural fire starts, subject to cultural and social constraints. Active Management includes silvicultural treatments and/or the reintroduction of fire as prescribed fire. Mechanical treatments may be needed in order to reintroduce fire. Restoration activities, including design and implementation, should be tailored to the fire regimes of each forest type (see Appendix B). Fire is used to achieve ecological objectives and ultimately increase public understanding and acceptance of fire as a natural process. Once fire is reintroduced, natural or prescribed fires can be implemented or permitted on a natural interval, thereby restoring this fundamental process within the forest community.

6) Consider social constraints and seek public support for reintroducing fire on the landscape: The use of fire in restoration will require a commitment to ecological principles combined with sensitivity to social constraints. Current and expanding human occupation of forest landscapes, carbon dioxide release, clean air regulations, and other factors may limit the widespread return of fire. As such, where the risk of social backlash is high, the use of fire will move forward only when broad public support is gained. Proper use of fire as a component of restoration, combined with community outreach, can enhance public support and understanding over time.

7) Engage community and interested parties in the restoration process: Community involvement and support enhances the ability to achieve restoration on the ground. Successful restoration seems to occur when there is a consensus-building, grassroots collaborative group whose mission is to coordinate efforts that enhance, conserve and protect natural resources and local lifestyles for present and future generations. Restoration efforts should be developed jointly by agency staff, community members, and other interested parties. This cooperation will lead to better and more productive outcomes, and the wide range of knowledge, opinions, and interests will contribute to project design and implementation. Finally, landscape-level approaches are more efficient and effective than smaller individual project efforts and should lead to increased quality of life and a greater sense of connection to the landscape.

8) Improve terrestrial and aquatic habitat and connectivity: Restoration projects should enhance habitat for the complex of terrestrial and aquatic species that are native to the target location or ecosystem. Projects should, when ecologically beneficial, enhance habitat connectivity to promote free migration and movement of native species between and through natural landscapes. Enhanced connectivity does not preclude future active management.

9) Emphasize ecosystem goods and services and sustainable land management: Restoration activities should lead to the sustained abundance of ecosystem goods and services within the landscape. Ecosystem goods and services encompass human-derived goods and services from ecological landscapes and sustainable ecosystems. Restoration activities should be evaluated for the potential to influence these services and provide goods.

10) Integrate restoration with socioeconomic well-being: Restoration efforts must enhance long-term social benefits and be economically feasible to ensure success. Restoration activities should emphasize landscapes that provide sustained employment opportunities and maintain thriving communities, both rural and supporting urban areas. Communities should benefit from restoration in numerous ways including employment opportunities, healthy living environments, and intact infrastructures. A sustainable, vibrant, integrated forest industry infrastructure is critical to implementation of viable restoration projects involving vegetative management by providing necessary equipment, expertise, and markets to help offset restoration costs.

11) Enhance education and recreation activities to build support for restoration: Promote education and recreation activities and facilities which interpret and complement the natural function of the ecosystem. Education and recreation activities on national forest lands are highly important and can provide opportunities for people to both observe and appreciate restoration efforts.

12) Protect and improve overall watershed health, including stream health, soil quality and function, and riparian function: Restoration activities should focus on restoring and maintaining properly functioning conditions in high value watersheds and riparian areas. Stream bank, stream channel and stream crossing restoration and improvements in priority watersheds are critical to achieving watershed health and resiliency that allows for functioning hydrologic conditions and aquatic habitat. Restoration projects should include efforts to minimize long-term soil degradation and erosion and should also strive to improve soil productivity increase soil water infiltration rates and water holding capacity.

13) Establish and maintain a safe road and trail system that is ecologically sustainable: National Forest System roads and trails provide important access for land management activities and public use. However, many national forests currently have some roads and trails that are adversely impacting watersheds and wildlife. The Forest Service, along with local communities and interested parties, should analyze which roads and trails will be maintained, constructed, reconstructed, or decommissioned to address ecological concerns and access needs. Road and trail restoration and maintenance can improve wildlife and fisheries habitat, protect watersheds, and improve public access.

IMPLEMENTATION PLAN

I. INTRODUCTION

The Montana Forest Restoration Working Group (MFRWG), in addition to developing principles to guide restoration activities in Montana, assessed process and implementation steps needed to assure application of the principles on the ground. Its initial focus was on Forest Service restoration projects in Montana.

The Group concluded that early, enhanced engagement of diverse community interests in the selection, design and monitoring of restoration projects would result in broader public support for such efforts and more work getting accomplished on the ground. Additionally, it felt that a new organizational structure was needed to ensure such engagement, and recommends the formation of Forest-level Restoration Committees (RCs) for this purpose. In the Group's view, constructive engagement by the Forest Service with Restoration Committees, and support for concepts which underlie their formation, will be essential to achieve the desired results.

II. RESTORATION COMMITTEES (RCs)

A. Function

Restoration Committees (RCs) will function, in cooperation with the Forest Service, to ensure diverse and knowledgeable community engagement in the selection, design and monitoring of restoration projects on National Forests in Montana. (For detailed discussion, see "D. RC-Forest Service Interface" below.)

B. Initial Structure: Pilot Effort

To achieve meaningful interface with on-the-ground restoration, RCs will need to function at the project level. The MFRWG assessed various approaches to achieving this goal, and initially concluded that multiple RCs would be needed in Montana. After considering multiple factors, including partner organizational capacities, the immediate availability of citizens willing to participate, and budget issues, the Group concluded that a pilot effort was appropriate, and has proposed:

1) The MFRWG will become the Montana Forest Restoration Committee (MFRC). It will be the governing body under whose authority all work will be conducted, and to which all of its component units will be ultimately accountable. The MFRC will meet once or twice per year, and will have authority to approve new, Forest-level or local RC's, changes in Restoration Principles, etc. In addition, the MFRC will evaluate the pilot effort and make changes as necessary to better accomplish the goals of the RCs.

Forest Service representatives will serve as ex-officio members of the MFRC.

2) The MFRC will elect a Steering Committee to which it will delegate day-to-day operational and executive functions, as well as strategic planning, fundraising and outreach. The Steering Committee will elect its own officers, who will serve as members of the Executive Committee. The Steering Committee will determine how it will carry out its various functions. In addition to its other responsibilities, the Steering Committee will:

a) Work with the MFRC Fiscal Agent to develop an RC budget and recommended staffing structure and, with MFRC organizational partners, solicit necessary operational funds.

b) Serve as the liaison between the MFRC and the Forest Service at the Regional and Forest level.

c) Serve as the liaison between the local RCs and the MFRC, providing periodic updates on progress, challenges and lessons learned.

d) Periodically review the composition of the MFRC, and if not sufficiently representative of diverse interests, appoint additional members.

e) MFRC staff will be hired by the SC and supervised by its chairperson or, in the event of co-chairs, the designated co-chair.

f) Assess potential Fiscal Agents and select one, by consensus.

3) Two Forest-level RCs will initially be established, the Lolo RC and the Bitterroot RC, to engage with restoration projects on those Forests. The membership of the MFRC and the Forest-level RCs will be comprised of those members of the MFRC who wish to serve in the new capacity. This membership will be augmented by the MFRC Steering Committee as needed to assure adequate diversity of representation. Each Forest-level RC will elect a chairperson, who will serve as a member of the MFRC Steering Committee.

C. Initial Establishment

Establishment of the pilot MFRC will require energy, time and positive engagement from many people and groups. To avoid wasted effort, an early and clear indication is essential from the Forest Service that it supports this endeavor. To move forward with MFRC establishment:

1) The MFRC Steering Committee (SC) will submit to the Region I Regional Forester a summary proposal that includes the MFRWG-adopted restoration principles, as well as the proposed MFRC structure, function, budget and fund-raising strategy. The summary will make clear the pilot nature of the effort and the goal of establishing MFRC throughout the region. The SC will request that the Regional Forester review the proposal and respond with a formal commitment of support and cooperation.

2) The SC will receive from the Regional Forester a commitment to support the MFRC proposal. The Regional Forester will also send out a memo to the Forest Supervisors of the Lolo and Bitterroot, directing and/or encouraging their cooperative participation, and will include in that communication a template Memorandum of Understanding (MOU) for use by the relevant Forest and RC.

3) The MFRC Steering Committee and the engaged Forests will enter into an MOU specifying the terms of cooperative interaction and describing the respective roles and responsibilities of the Forest Service, MFRC and the Fiscal Agent.

4) The MFRC and a Fiscal Agent will enter an MOU formalizing their relationship and committing to collaboration in pursuing operational funding for the pilot MFRC.

D. MFRC, Forest-level RC and Forest Service Interface

The MFRC spent considerable time assessing what changes needed to take place in process and implementation issues affecting restoration projects. The following comprises their conclusions about the proposed scope of work of Restoration Committees.

For Forest-level or local RCs to be successful in reducing appeals and litigation of restoration projects, RC-engaged stakeholders should be involved as early as possible in restoration planning to help shape the outcomes, impacts and benefits of all projects. Each RC will assess its capacities in terms of expertise, time commitment of members, etc., and determine the most appropriate scope of its involvement, as well as the areas of emphasis for that involvement.

Whenever possible, RCs will be involved in project prioritization and planning before the Forest Service begins the NEPA process for specific projects. Recognizing this will not always be feasible, the RC will engage with the Forest Service before and during the development of proposed actions. Additionally, RCs will also be involved at the program level in helping to set the priorities and direction of restoration programs.

As part of this process, the Forest Service and the local RC will discuss: place, issues in that place/watershed, management goals, priorities, desired conditions (derived from Forest Plan and adopted Restoration Principles) budget and funding sources, timing, and public concerns of which the agency is aware. After careful review by the members of the RC, the RC will provide the Forest Service with suggestions for action at the level it feels appropriate, up to designing a full project proposal, delineate areas of agreement and disagreement, and a proposal for further public involvement and outreach, if applicable.

RCs will be involved during the NEPA process through ongoing consultation via a pre-established check-in process between the NEPA writer and the RC and meetings with the Deciding Officer after public comment and before final decision.

When applicable, RCs will work with the Forest Service to perform pre-project monitoring to establish baseline data, propose a desired monitoring plan and assess funding available and fundraising strategies/participation when needed.

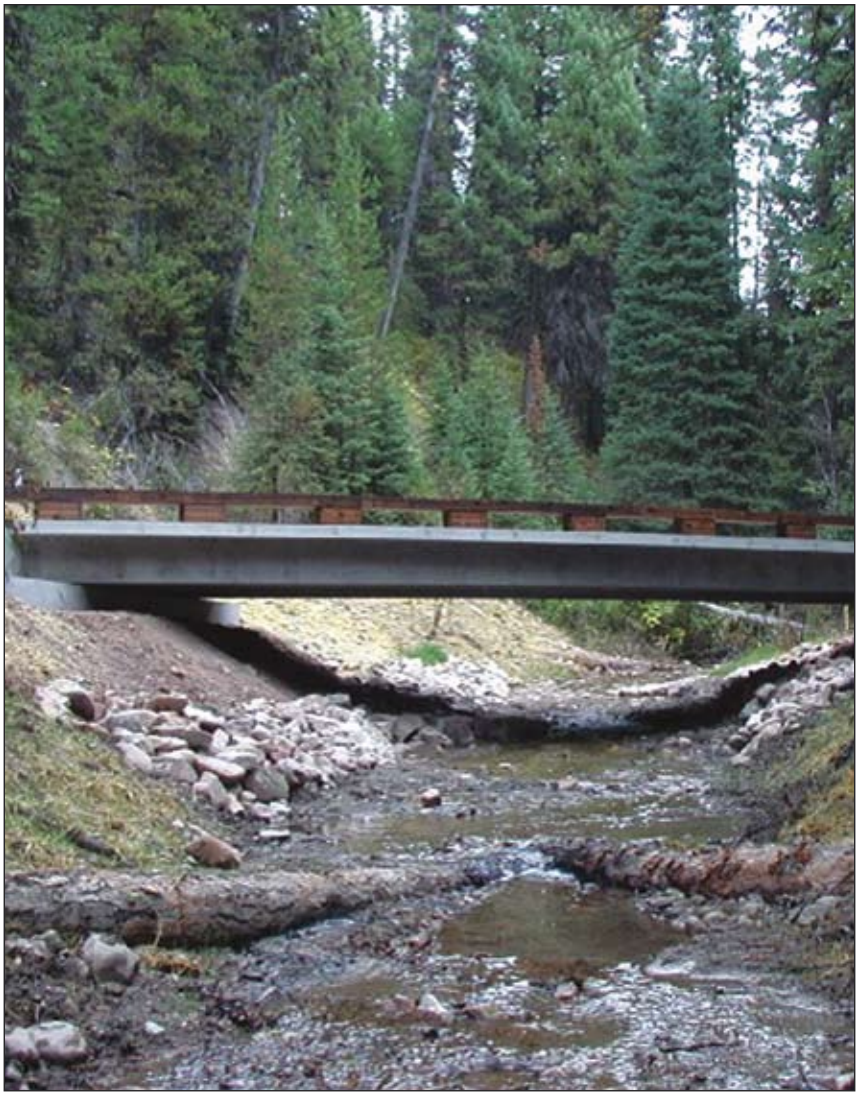
RCs may want the opportunity to interface with project implementation through field visits, meetings with contractors, sale administrators and others.

The Forest Service will communicate with the RC in order to track progress towards the Forest Service's Integrated Restoration Strategy goals.

The RCs will retain the discretion to evaluate their own capacity to pick and choose projects from those submitted or brought to them, to get involved or not, and the depth of their involvement.

Recommended Scale:

We recommend that, after successful demonstration by the pilot Lolo/Bitterroot RCs, additional Restoration Committees will be formed to work at the local or forest level.



Operation by Consensus:

A goal of the RC is to reduce the number of appeals and litigation for restoration projects conducted by the Forest Service. As such, each RC will operate on a consensus model to reach agreement on their level of approval for a given project or action.

In reviewing proposals from the Forest Service, the RC will provide a written statement articulating the level of support the Committee has for a project prior to the Forest Service signing the decision document.

It will be the responsibility of each member of the RC to communicate to the Committee and the Forest Service about agreements, disagreements and/or concerns from outside groups or individuals of which the member becomes aware.

F. Federal Advisory Committee Act (FACA)

It is our recommendation that RCs not be FACA committees due to the actual and perceived limitations associated with FACA.

G. MFRC Operational Funding

The Working Group recognizes that funding will be needed to provide staffing for coordination and other administrative work related to the daily operations of the MFRC and its components. It is currently estimated that one half-time person would satisfy those needs.

H. Oversight of additional RCs

If the pilot MFRC effort is successful, we envision establishment of additional RCs on a forest basis in Montana. In that event, the MFRC, in its present or modified form, will act as the oversight committee for all RCs, and its tasks will include:

- Endorsing and facilitating new forest-level Restoration Committees.
- Working with the Fiscal Agent and partner organizations on funding, convening, and related issues.
- Augmentation of RC members if needed to assure balance
- Initiation and formation of potential additional RCs in the future.
- Decisions regarding interface with political leadership.
- Outreach to other groups and interests.
- Interfacing with USFS at regional and forest-level.
- Annually reviewing of the results of the process to achieve the goals as outlined in the Preamble.
- Considering and establishing appropriate tenure, and whether or not to use staggered terms for RC members.

The MFRC will address the above tasks, unless they have been delegated to the Steering Committee.

I. Funding

The Group recognizes that implementation of restoration projects requires that they be economically feasible. Value from restoration-generated commercial products, appropriated monies, and grant funding are all important sources of financial support to achieve restoration goals.

In regards to the National Environmental Policy Act (NEPA), access to new money is needed for projects developed by this process. It is agreed that it would not be acceptable to transfer NEPA funding for established programs of work with merchantable timber outputs to restoration projects that may not produce receipts. Therefore, a strategy to develop additional NEPA funding is essential.

Congressionally-approved Forest Service budgets have been and will likely continue to be a limiting factor in the implementation of restoration projects. Additionally, the Forest Service may not initiate or lobby for legislation to address this central issue. To implement the goals of the MFRC, it will be essential that the non-federal MFRC cooperators agree to a multi-faceted action plan in pursuit of restoration funding. To that end, the non-federal MFRC cooperators will develop a comprehensive funding action plan that will address both appropriated and philanthropic funding sources.

APPENDICES

APPENDIX A
Forest Restoration Definitions

Adaptive management: The process of learning as you go, where the research results and monitoring are continually brought forward and management practices are continually reassessed as new information becomes available.

Active management: Strategies designed to attain desired ecosystem objectives and future conditions by applying cultural operations and forest management strategies (including natural process based management). These may include timber harvest, tree planting, thinning, prescribed burning, fertilization, grazing, weed control, improving wildlife habitat, stream channel reconstruction, erosion control, decommissioning of roads, trail and road maintenance and construction, and recreation resource maintenance and improvement.

Ecological integrity: The quality of a natural unmanaged or managed ecosystem in which the ecological processes are sustained, with genetic, species and ecosystem diversity assured for the future. An ecosystem has integrity when it is deemed characteristic for its natural region, including the composition and abundance of native species and biological communities, rates of change and supporting processes.

Ecological processes: Processes fundamental to the functioning of a healthy and sustainable ecosystem, usually involving the transfer of energy and substances from one medium or trophic level to another.

Economic feasibility: The ability to obtain the financial resources necessary to conduct restoration projects on the ground. It is anticipated that these resources may come from congressionally appropriated funds, the commercial value of byproducts removed during restoration, and/or private philanthropy. An assessment of economic feasibility will include both a project budget and anticipated sources of funding to carry out the work proposed.

Ecosystem goods and services: The quantifiable goods and services that an ecosystem provides to humans, including consumables and non-consumables. Resource economists assign monetary values to these goods and services to estimate the economic value of a healthy ecosystem. Examples of ecosystem goods and services include, but are not limited to, timber, tourism, recreation opportunities, hunting and fishing, clean, abundant water, healthy fish and wildlife populations, productive soils, pollination of crops and native vegetation, and fulfillment of people's cultural, spiritual, intellectual needs.

Natural process: A process existing in or produced by nature rather than by the intent of human beings.

Natural process-based management: Integration of a given species' attributes, and the intensity of disturbances to which the species (or forest type) is adapted, into a management framework that addresses both human needs and benefits and forest sustainability.

Passive management: Strategies designed to attain desired ecosystem objectives and future conditions in which human intervention in an ecosystem is minimal and natural processes such as fire and insect and disease infestations are allowed to play out.

Prescribed fire: A fire management technique that purposely ignites fires in vegetated ecosystems to restore forest health and reduce fire hazard.

Resilience: Resilience is the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks.

Restoration: The intentional process which initiates the recovery of an altered ecosystem to a state of ecological integrity.

Restoration workforce: The collective workers, equipment, manufacturing infrastructure and expertise needed to economically implement ecological restoration projects.

Road decommissioning: Activities that result in the stabilization and restoration of unneeded roads to a more natural state. Activities used to decommission a road include one or more of the following: (1) reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation; (2) blocking the entrance to the road, installing water bars, removing culverts, re-establishing drainage-ways, and removing unstable fills; (3) pulling back road shoulders; (4) converting roads to trails; (5) scattering slash on the roadbed; (6) complete elimination of the roadbed by restoring natural contours and slopes; and (7) other methods designed to meet the specific conditions associated with the land around the unneeded road.

Silvicultural treatments: A variety of treatments applied to achieve broad management and restoration objectives. Treatments are specifically applied for such purposes as reducing tree density, increasing vigor, changing species composition, modifying structure, inducing regeneration, removing infected/infested trees, enhancing forage, and recovering forest products needed by society.

Sustainability: The ability of any enduring social or natural system to continue functioning into the indefinite future without being forced into decline through exhaustion of key resources. In a sustainable system, the demands placed upon the environment by people and commerce can be met without reducing the capacity of the environment for future generations. Essentially, it is recognized that economic security, community vitality, equity, quality of life, and commitment to the welfare of future generations depends upon maintaining and restoring ecological integrity.

Wildland fire use: The management of a natural ignition occurring under pre determined parameters to meet resource objectives.

APPENDIX B
Forest Types and Fire Regimes

This appendix, which expands upon principle five, is included because the issue of fire is one of the most contentious issues related to forest ecosystem restoration. It is therefore significant that our diverse group has agreed to include this appendix.

The following briefly describes major forest ecotypes in Montana and ascribes to each an approximate historical fire regime and a very general picture of historical stand structure.

Because there is overlap between each ecotype and no black and white distinctions in historical fire regimes or stand structures, these elements should be considered in the planning and design of restoration projects.

Restoration by Forest Type

1) *Low to mid-elevation ponderosa pine, Douglas- fir, and western larch forests* typify the low and mixed severity fire regime with average fire return intervals of 5 to 30 years. Pure ponderosa pine experienced frequent, low severity fires and primarily exhibited an open stand structure across the landscape. Mixed ponderosa pine/Douglas-fir/western Larch (in all combinations) forests exhibited less frequent fire, more variable stand structures across the landscape, and variable fire intensity and severity. Historically, these low elevation forests were subject to the greatest amount of timber management and fire suppression activities and thus are likely the furthest from their natural range of variability. These forest types are the most likely and appropriate candidates for restoration activities to re-establish natural fire return intervals, but especially in the case of mid-elevation mixed fire severity forests, restoration activities should be taken on a case-by-case basis.

2) *Mid elevation lodgepole pine, Douglas- fir, and subalpine fir forests* exhibit dense stand structures and historically experienced mixed and stand replacing fire regimes. Mixed fire regimes may be more widespread than stand replacement regimes in the Inland Northwest and have fire intervals averaging between 30 and 100 years. Stand replacement regimes have average natural return intervals of about 100 – 200 years. Mixed severity forest types were likely historically dominant and may not require any specific management activity to allow them to maintain function within their historic range of variability, but again they would have to be considered on a case-by-case-basis.

3) *High elevation subalpine fir, lodgepole pine and Englemann spruce forests* historically experienced fire on a 200 -300 year fire return interval where subalpine forests of whitebark pine historically experienced fire on a mean fire return interval of 50 – 300 years. These forest ecotypes are likely the closest to their natural range of variability and likely require minimal restoration efforts. Though not always restoration, mechanical fuel reduction treatments may be necessary for protecting values at risk in all forest types and fire regimes.

NOTES

NOTES

CONTINUED FROM FRONT...

Bob Harrington,
Dept. of Natural Resources & Conservation

Dale Harris,
Great Burn Study Group

Jeff Juel,
WildWest Institute

Tim Love,
U.S. Forest Service

Julia Riber,
U.S. Forest Service

Jack Rich,
Rich Ranches

Chuck Roady,
FH Stoltze Land & Lumber

Paul Rumelhart, Kootenai River Development Council

Gordy Sanders,
Pyramid Mountain Lumber

Dan Thompson,
Ravalli County Off-Road Users Assoc.

Mark Vander Meer,
National Network of Forest Practitioners

Mike Volesky,
Governor's Office

CONVENERS:

Brian Kahn,
Artemis Common Ground

Mary Mitsos,
National Forest Foundation

SUPPORT STAFF:

Karen DiBari,
National Forest Foundation

Chelsea Pennick,
National Forest Foundation

For Further Information:
Visit www.montanarestoration.org
or email info@montanarestoration.org